

# THE LARGEST KNOWN PRIMES

(Primes with 300,000 or more digits)

(selected smaller primes which have comments are included)

Originally Compiled by Samuel Yates – Continued by Chris Caldwell

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So that I can maintain this database of the 5,000 largest known primes (plus selected smaller primes with 1,000 or more digits), please send any new primes (that are large enough) to:

<http://primes.utm.edu/bios/submission.php>

This list in a searchable form (plus information such as how to find large primes and how to prove primality) is available at the interactive web site:

<http://primes.utm.edu/primes/>

See the last pages for information about the provers.

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## 1 The List of Primes

The letters after the rank refer to when the prime was submitted. ‘a’ is this month, ‘b’ last month...

rank	description	digits	who	year	comment
1	$2^{43112609} - 1$	12978189	G10	08	Mersenne 47??
2	$2^{42643801} - 1$	12837064	G12	09	Mersenne 46??
3	$2^{37156667} - 1$	11185272	G11	08	Mersenne 45??
4	$2^{32582657} - 1$	9808358	G9	06	Mersenne 44??
5	$2^{30402457} - 1$	9152052	G9	05	Mersenne 43??
6	$2^{25964951} - 1$	7816230	G8	05	Mersenne 42?
7	$2^{24036583} - 1$	7235733	G7	04	Mersenne 41?
8	$2^{20996011} - 1$	6320430	G6	03	Mersenne 40?
9	$2^{13466917} - 1$	4053946	G5	01	Mersenne 39
10	$19249 \cdot 2^{13018586} + 1$	3918990	SB10	07	
11	$27653 \cdot 2^{9167433} + 1$	2759677	SB8	05	
12	$28433 \cdot 2^{7830457} + 1$	2357207	SB7	04	
13	$33661 \cdot 2^{7031232} + 1$	2116617	SB11	07	
14	$2^{6972593} - 1$	2098960	G4	99	Mersenne 38
15	$6679881 \cdot 2^{6679881} + 1$	2010852	L917	09	Cullen
16	$1582137 \cdot 2^{6328550} + 1$	1905090	L801	09	Cullen
17	$258317 \cdot 2^{5450519} + 1$	1640776	g414	08	
18	$3 \cdot 2^{5082306} + 1$	1529928	L780	09	Divides $GF(5082303, 3)$ , $GF(5082305, 5)$
19	$5359 \cdot 2^{5054502} + 1$	1521561	SB6	03	
20	$265711 \cdot 2^{4858008} + 1$	1462412	g414	08	
21	$3 \cdot 2^{4235414} - 1$	1274988	L606	08	
22	$24518^{262144} + 1$	1150678	g413	08	Generalized Fermat
23	$938237 \cdot 2^{3752950} - 1$	1129757	L521	07	Woodall

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24	$485767 \cdot 2^{3609357} - 1$	1086531	L622	08	
25	$5 \cdot 2^{3569154} - 1$	1074424	L503	09	
26	$7 \cdot 2^{3511774} + 1$	1057151	p236	08	Divides $GF(3511773, 6)$
27	$3139 \cdot 2^{3321905} - 1$	999997	L185	08	
28	$4847 \cdot 2^{3321063} + 1$	999744	SB9	05	
29	$113983 \cdot 2^{3201175} - 1$	963655	L613	08	
30	$3 \cdot 2^{3136255} - 1$	944108	L256	07	
31	$5 \cdot 2^{3059698} - 1$	921062	L503	08	
32	$2^{3021377} - 1$	909526	G3	98	Mersenne 37
33	$7 \cdot 2^{3015762} + 1$	907836	g279	08	
34	$4348099 \cdot 2^{2976221} - 1$	895939	L466	08	
35	$2^{2976221} - 1$	895932	G2	97	Mersenne 36
36	$7 \cdot 2^{2915954} + 1$	877791	g279	08	Divides $GF(2915953, 12)$ [g322]
37	$222361 \cdot 2^{2854840} + 1$	859398	g403	06	
38	$1372930^{131072} + 1$	804474	g236	03	Generalized Fermat
39	$1361244^{131072} + 1$	803988	g236	04	Generalized Fermat
40	$1176694^{131072} + 1$	795695	g236	03	Generalized Fermat
41	$342673 \cdot 2^{2639439} - 1$	794556	L53	07	
42	$572186^{131072} + 1$	754652	g0	04	Generalized Fermat
43	$3 \cdot 2^{2478785} + 1$	746190	g245	03	Divides Fermat $F(2478782)$ , $GF(2478782, 3)$ , $GF(2478776, 6)$ , $GF(2478782, 12)$
44	$81 \cdot 2^{2468789} + 1$	743182	g418	09	
45	$26773 \cdot 2^{2465343} - 1$	742147	L197	06	
46	$5 \cdot 2^{2460482} - 1$	740680	L503	08	
47	$386892^{131072} + 1$	732377	p259	09	Generalized Fermat
48	$737 \cdot 2^{2382804} - 1$	717299	L191	07	
49	$1183953 \cdot 2^{2367907} - 1$	712818	L447	07	Woodall
50	$127 \cdot 2^{2346377} - 1$	706332	L282	09	
51	$275293 \cdot 2^{2335007} - 1$	702913	L193	06	
52	$3 \cdot 2^{2312734} - 1$	696203	L158	05	
53	$450457 \cdot 2^{2307905} - 1$	694755	L172	06	
54	$3 \cdot 2^{2291610} + 1$	689844	L753	08	Divides $GF(2291607, 3)$ , $GF(2291609, 5)$
55	$130816^{131072} + 1$	670651	g308	03	Generalized Fermat
56	$19 \cdot 2^{2206266} + 1$	664154	p189	06	
57	$5077 \cdot 2^{2198565} - 1$	661838	L251	08	
58	$114487 \cdot 2^{2198389} - 1$	661787	L179	06	
59	$196597 \cdot 2^{2178109} - 1$	655682	L175	06	
60	$7 \cdot 2^{2167800} + 1$	652574	g279	07	Divides Fermat $F(2167797)$ , $GF(2167799, 5)$ , $GF(2167799, 10)$
61	$3 \cdot 2^{2145353} + 1$	645817	g245	03	Divides Fermat $F(2145351)$ , $GF(2145351, 3)$ , $GF(2145352, 5)$ , $GF(2145348, 6)$ , $GF(2145352, 10)$ , $GF(2145351, 12)$
62	$23 \cdot 2^{2141626} - 1$	644696	L545	08	

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63	$7 \cdot 2^{2139912} + 1$	644179	g279	07	Divides $GF(2139911, 12)$
64	$62722^{131072} + 1$	628808	g308	03	Generalized Fermat
65	$1003 \cdot 2^{2076535} - 1$	625103	L51	08	
66	$9 \cdot 2^{2060941} - 1$	620407	L503	08	
67	$121 \cdot 2^{2033941} - 1$	612280	L162	06	
68	$251749 \cdot 2^{2013995} - 1$	606279	L436	07	Woodall
69	$467917 \cdot 2^{1993429} - 1$	600088	L160	05	
70	$137137 \cdot 2^{1993201} - 1$	600019	L321	07	
71	$17 \cdot 2^{1990299} + 1$	599141	g267	06	Divides $GF(1990298, 3)$
72	$25 \cdot 2^{1977369} - 1$	595249	L426	08	
73	$121 \cdot 2^{1954243} - 1$	588288	L162	06	
74	$214519 \cdot 2^{1929114} + 1$	580727	g346	06	
75	$345067 \cdot 2^{1876573} - 1$	564911	g59	05	
76	$13 \cdot 2^{1861732} + 1$	560439	g267	05	Divides $GF(1861731, 6)$
77	$137 \cdot 2^{1849238} - 1$	556679	L321	07	
78	$15 \cdot 2^{1837873} - 1$	553257	L632	08	
79	$3 \cdot 2^{1832496} + 1$	551637	p189	07	Divides $GF(1832490, 3)$ , $GF(1832494, 5)$
80	$21 \cdot 2^{1830919} + 1$	551163	g279	04	
81	$33 \cdot 2^{1813526} - 1$	545928	L621	08	
82	$417643 \cdot 2^{1800787} - 1$	542097	L134	05	
83	$357659 \cdot 2^{1779748} - 1$	535764	L47	05	
84	$5 \cdot 2^{1777515} + 1$	535087	p148	05	Divides $GF(1777511, 5)$ , $GF(1777514, 6)$
85	$5077 \cdot 2^{1753317} - 1$	527805	L251	08	
86	$1179 \cdot 2^{1750847} + 1$	527061	g387	09	
87	$253 \cdot 2^{1722623} - 1$	518564	L145	07	
88	$121 \cdot 2^{1695499} - 1$	510399	L62	05	
89	$19 \cdot 2^{1684813} - 1$	507181	L503	08	
90	$15 \cdot 2^{1667744} + 1$	502043	g279	07	
91	$149183 \cdot 2^{1666957} + 1$	501810	g346	05	
92	$63 \cdot 2^{1659338} - 1$	499513	L503	08	
93	$61 \cdot 2^{1654383} - 1$	498021	L503	08	
94	$68 \cdot 23^{365239} + 1$	497358	p261	09	
95	$69 \cdot 2^{1649423} - 1$	496528	L621	08	
96	$469949 \cdot 2^{1649228} - 1$	496473	L160	07	
97	$81 \cdot 2^{1643428} + 1$	494724	g418	09	Generalized Fermat
98	$81 \cdot 2^{1606848} + 1$	483712	gt	07	Generalized Fermat
99	$15 \cdot 2^{1597510} + 1$	480900	g279	06	
100	$58753 \cdot 2^{1594323} - 1$	479944	p190	06	
101	$737 \cdot 2^{1592724} - 1$	479461	L191	06	
102	$110413 \cdot 2^{1591999} - 1$	479245	L111	05	
103	$99 \cdot 2^{1591984} - 1$	479237	L282	09	
104	$1179 \cdot 2^{1591362} + 1$	479051	g387	06	
105	$121 \cdot 2^{1589157} - 1$	478387	L65	05	
106	$19502212^{65536} + 1$	477763	p160	05	Generalized Fermat
107	$311 \cdot 2^{1581686} - 1$	476138	L623	09	
108	$17684828^{65536} + 1$	474979	g410	07	Generalized Fermat
109	$17655444^{65536} + 1$	474932	g410	07	Generalized Fermat
110	$17629398^{65536} + 1$	474890	g410	07	Generalized Fermat

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111	$29 \cdot 2^{1574753} + 1$	474050	L391	08	
112	$139 \cdot 2^{1567874} + 1$	471980	p189	06	
113	$81 \cdot 2^{1544545} + 1$	464957	gt	07	
114	$234847 \cdot 2^{1535589} - 1$	462264	L73	05	
115	$121 \cdot 2^{1526097} - 1$	459404	L65	05	
116	$19709699 \cdot 2^{1521540} - 1$	458037	L421	08	
117	$13 \cdot 2^{1499876} + 1$	451509	g267	04	Divides $GF(1499875, 3)$
118	$7 \cdot 2^{1491852} + 1$	449094	p166	05	Divides $GF(1491851, 6)$
119	$2232007 \cdot 2^{1490605} - 1$	448724	L4	03	
120	$9 \cdot 2^{1481821} - 1$	446074	L503	08	
121	$29 \cdot 2^{1478344} - 1$	445028	L10	05	
122	$27 \cdot 2^{1476347} + 1$	444427	g279	05	
123	$325627 \cdot 2^{1472117} - 1$	443157	L111	05	
124	$1467763 \cdot 2^{1467763} - 1$	441847	L381	07	Woodall
125	$77 \cdot 2^{1467554} - 1$	441780	L145	06	
126	$99 \cdot 2^{1461496} - 1$	439957	L282	09	
127	$21 \cdot 2^{1452771} - 1$	437329	L503	08	
128	$23 \cdot 2^{1448461} + 1$	436032	L170	08	
129	$19 \cdot 2^{1434165} - 1$	431728	L503	08	
130	$113 \cdot 2^{1425998} - 1$	429271	L257	08	
131	$21 \cdot 2^{1421741} + 1$	427989	g279	05	
132	$15 \cdot 2^{1418605} + 1$	427044	g279	06	Divides $GF(1418600, 5)$ , $GF(1418601, 6)$
133	$29 \cdot 2^{1416873} + 1$	426523	g305	07	
134	$149797 \cdot 2^{1414137} - 1$	425703	L105	05	
135	$127 \cdot 2^{1398889} - 1$	421110	L486	08	
136	$1564347 \cdot 2^{1398269} - 1$	420928	L466	08	
137	$2^{1398269} - 1$	420921	G1	96	Mersenne 35
138	$192089 \cdot 2^{1395688} - 1$	420150	L49	04	
139	$113 \cdot 2^{1389674} - 1$	418336	L257	08	
140	$17 \cdot 2^{1388355} + 1$	417938	g267	05	Divides $GF(1388354, 10)$
141	$2187182^{65536} + 1$	415491	g260	09	Generalized Fermat
142	$2177038^{65536} + 1$	415359	g260	08	Generalized Fermat
143	$2162068^{65536} + 1$	415162	g260	08	Generalized Fermat
144	$15 \cdot 2^{1368428} + 1$	411940	g279	06	
145	$1874512^{65536} + 1$	411101	g413	08	Generalized Fermat
146	$241489 \cdot 2^{1365062} + 1$	410930	L101	05	
147	$1828502^{65536} + 1$	410393	GF2	05	Generalized Fermat
148	$107 \cdot 2^{1362654} - 1$	410202	L621	09	
149	$35 \cdot 2^{1357881} + 1$	408765	g279	06	
150	$299 \cdot 2^{1355004} - 1$	407900	L426	09	
151	$338707 \cdot 2^{1354830} + 1$	407850	L124	05	Cullen
152	$1540550^{65536} + 1$	405516	GF2	03	Generalized Fermat
153	$15 \cdot 2^{1344313} - 1$	404680	L139	07	
154	$1483076^{65536} + 1$	404434	GF2	03	Generalized Fermat
155	$11 \cdot 2^{1343347} + 1$	404389	p169	05	Divides $GF(1343346, 6)$
156	$1478036^{65536} + 1$	404337	GF2	02	Generalized Fermat
157	$54767 \cdot 2^{1337287} + 1$	402569	SB5	02	
158	$1374038^{65536} + 1$	402260	GF3	03	Generalized Fermat
159	$81 \cdot 2^{1335675} - 1$	402081	L268	08	

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160	$1361846^{65536} + 1$	402007	GF3	02	Generalized Fermat
161	$1266062^{65536} + 1$	399931	g295	02	Generalized Fermat
162	$5 \cdot 2^{1320487} + 1$	397507	g55	02	Divides $GF(1320486, 12)$
163	$1057476^{65536} + 1$	394807	g197	02	Generalized Fermat
164	$1001184681 \cdot 2^{1310640} + 1$	394551	p221	09	
165	$250107985 \cdot 2^{1310642} + 1$	394551	p221	09	
166	$1024390^{65536} + 1$	393902	g299	03	Generalized Fermat
167	$19581121 \cdot 2^{1303821} - 1$	392497	p49	09	
168	$25 \cdot 2^{1298186} + 1$	390795	g279	05	Generalized Fermat
169	$99 \cdot 2^{1292395} - 1$	389052	L282	08	
170	$857678^{65536} + 1$	388847	GF0	02	Generalized Fermat
171	$843832^{65536} + 1$	388384	GF0	01	Generalized Fermat
172	$138847 \cdot 2^{1283793} - 1$	386466	L2	03	
173	$5 \cdot 2^{1282755} + 1$	386149	g55	02	Divides $GF(1282754, 3)$ , $GF(1282748, 5)$
174	$15 \cdot 2^{1276177} + 1$	384169	g279	06	Divides $GF(1276174, 3)$ , $GF(1276174, 10)$
175	$1268979 \cdot 2^{1268979} - 1$	382007	L201	07	Woodall
176	$671600^{65536} + 1$	381886	g55	02	Generalized Fermat
177	$11 \cdot 2^{1261478} - 1$	379744	L163	06	
178	$25 \cdot 2^{1258562} + 1$	378867	g279	04	Generalized Fermat
179	$2084259 \cdot 2^{1257787} - 1$	378638	L466	08	
180	$26869 \cdot 2^{1257787} - 1$	378637	L466	07	
181	$2^{1257787} - 1$	378632	SG	96	Mersenne 34
182	$49 \cdot 2^{1257295} - 1$	378486	L217	08	
183	$6201 \cdot 2^{1257068} + 1$	378419	L667	08	
184	$81 \cdot 2^{1254155} + 1$	377541	gt	07	
185	$27 \cdot 2^{1253870} - 1$	377454	L65	08	
186	$80857169 \cdot 2^{1251076} - 1$	376620	L10	04	
187	$57023 \cdot 6^{483561} - 1$	376289	p258	09	
188	$549868^{65536} + 1$	376194	g295	03	Generalized Fermat
189	$544118^{65536} + 1$	375895	g295	02	Generalized Fermat
190	$15 \cdot 2^{1244377} + 1$	374596	g279	06	
191	$257708 \cdot 5^{535176} - 1$	374078	p196	07	
192	$21 \cdot 2^{1240067} + 1$	373299	g279	04	
193	$43 \cdot 2^{1235298} + 1$	371864	g279	06	
194	$3 \cdot 2^{1232255} - 1$	370947	L30	04	
195	$15 \cdot 2^{1229600} + 1$	370148	g279	06	
196	$19581121 \cdot 2^{1229561} - 1$	370143	p49	08	
197	$440846^{65536} + 1$	369904	GC1	02	Generalized Fermat
198	$177482 \cdot 117^{177482} + 1$	367072	g407	08	Generalized Cullen
199	$122 \cdot 18^{292318} + 1$	366941	p231	09	
200	$25 \cdot 2^{1211488} + 1$	364696	g279	05	Generalized Fermat, divides $GF(1211487, 12)$
201	$357868^{65536} + 1$	363969	g266	03	Generalized Fermat
202	$2^{1203793} - 2^{601897} + 1$	362378	L192	06	Gaussian Mersenne norm 37?
203	$3 \cdot 2^{1201046} - 1$	361552	L77	04	
204	$502541 \cdot 2^{1199930} - 1$	361221	L93	04	
205	$1195203 \cdot 2^{1195203} - 1$	359799	L124	05	Woodall
206	$5 \cdot 2^{1194164} - 1$	359480	L478	08	

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207	$105 \cdot 2^{1193072} - 1$	359153	L384	09	
208	$292550^{65536} + 1$	358233	GC2	02	Generalized Fermat
209	$291726^{65536} + 1$	358153	GC2	02	Generalized Fermat
210	$71009 \cdot 2^{1185112} - 1$	356760	L47	04	
211	$78959 \cdot 6^{458114} - 1$	356487	p256	09	
212	$21 \cdot 2^{1182083} - 1$	355844	L323	09	
213	$55 \cdot 2^{1177924} + 1$	354593	L669	09	
214	$255694^{65536} + 1$	354401	g266	02	Generalized Fermat
215	$617 \cdot 2^{1175468} - 1$	353854	L426	07	
216	$59 \cdot 2^{1170231} + 1$	352277	L669	09	
217	$21 \cdot 2^{1170083} - 1$	352232	L503	08	
218	$27 \cdot 2^{1164664} + 1$	350601	g279	05	
219	$27 \cdot 2^{1163629} - 1$	350289	L503	08	
220	$55 \cdot 2^{1162155} - 1$	349846	L545	08	
221	$69109 \cdot 2^{1157446} + 1$	348431	SB4	02	
222	$152713 \cdot 2^{1154707} - 1$	347607	g23	04	
223	$29 \cdot 2^{1152765} + 1$	347019	g300	05	Divides $GF(1152760, 10)$
224	$189590^{65536} + 1$	345887	g262	02	Generalized Fermat
225	$1001155863 \cdot 2^{1146800} + 1$	345231	p221	09	
226	$350107 \cdot 2^{1144101} - 1$	344415	L35	04	
227	$31 \cdot 2^{1142093} - 1$	343806	L503	08	
228	$209826493 \cdot 2^{1140855} - 1$	343440	L10	04	
229	$500621 \cdot 2^{1138518} - 1$	342734	L73	04	
230	$504613 \cdot 2^{1136459} - 1$	342114	L84	04	
231	$33 \cdot 2^{1130884} + 1$	340432	L165	06	Divides $GF(1130881, 12)$
232	$64 \cdot 3^{712171} + 1$	339794	x28	06	
233	$63 \cdot 2^{1126551} - 1$	339128	L323	08	
234	$842711 \cdot 2^{1126138} - 1$	339008	L251	09	
235	$177 \cdot 2^{1121720} + 1$	337674	L129	06	
236	$141146^{65536} + 1$	337489	g281	02	Generalized Fermat
237	$165 \cdot 2^{1117217} + 1$	336319	g196	07	
238	$33 \cdot 2^{1115902} - 1$	335922	L488	08	
239	$45 \cdot 2^{1111703} + 1$	334658	L669	09	
240	$27 \cdot 2^{1108214} - 1$	333608	L590	08	
241	$99 \cdot 2^{1106989} - 1$	333239	L486	07	
242	$11 \cdot 2^{1104606} - 1$	332521	L10	05	
243	$49 \cdot 2^{1103430} + 1$	332168	L669	09	Generalized Fermat
244	$165 \cdot 2^{1100755} + 1$	331363	g196	07	
245	$289 \cdot 2^{1098117} - 1$	330569	L6	06	
246	$19433 \cdot 2^{1096861} + 1$	330193	g411	08	
247	$108368^{65536} + 1$	329968	g181	01	Generalized Fermat
248	$43 \cdot 2^{1087992} + 1$	327520	g279	06	
249	$45 \cdot 2^{1086062} + 1$	326939	L669	09	
250	$412717 \cdot 2^{1084409} - 1$	326446	L76	04	
251	$15 \cdot 2^{1084010} - 1$	326321	L139	06	
252	$103 \cdot 2^{1077739} - 1$	324434	L621	09	
253	$150847 \cdot 2^{1076441} - 1$	324047	L73	04	
254	$55 \cdot 2^{1075711} - 1$	323824	L545	08	
255	$85 \cdot 2^{1072368} + 1$	322817	g267	06	
256	$209826493 \cdot 2^{1071303} - 1$	322503	L10	04	

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257	$63 \cdot 2^{1070449} + 1$	322240	L669	09	
258	$107 \cdot 2^{1070256} - 1$	322182	L621	08	
259	$2203 \cdot 2^{1069647} - 1$	322000	L123	06	
260	$53 \cdot 2^{1066381} + 1$	321015	L669	09	
261	$133 \cdot 2^{1065655} - 1$	320797	L632	08	
262	$257 \cdot 2^{1064062} - 1$	320317	L632	08	
263	$217 \cdot 2^{1059961} - 1$	319083	L639	08	
264	$41 \cdot 2^{1059562} - 1$	318962	L282	09	
265	$864316301 \cdot 2^{1055106} - 1$	317628	L426	07	
266	$9 \cdot 2^{1051026} + 1$	316392	p156	04	Generalized Fermat
267	$12345 \cdot 2^{1047788} - 1$	315420	L426	09	
268	$11 \cdot 2^{1044086} - 1$	314303	L10	05	
269	$105 \cdot 2^{1043063} - 1$	313996	L384	09	
270	$151515 \cdot 2^{1043018} - 1$	313985	L426	07	
271	$35 \cdot 2^{1040005} + 1$	313075	g279	06	
272	$121 \cdot 2^{1039965} - 1$	313063	L65	04	
273	$958 \cdot 11^{300544} + 1$	312988	p217	08	
274	$13 \cdot 2^{1038896} + 1$	312740	g267	04	
275	$85 \cdot 2^{1034069} - 1$	311288	L323	07	
276	$217 \cdot 2^{1026869} - 1$	309121	L632	08	
277	$91 \cdot 2^{1026521} - 1$	309016	L323	08	
278	$31838235 \cdot 2^{1025596} + 1$	308743	p190	06	
279	$21 \cdot 2^{1022168} + 1$	307705	g279	04	
280	$48594^{65536} + 1$	307140	g141	00	Generalized Fermat
281	$205 \cdot 2^{1019679} - 1$	306957	L632	08	
282	$41 \cdot 2^{1018778} - 1$	306685	L282	09	
283	$65567 \cdot 2^{1013803} + 1$	305190	SB2	02	
284	$6119 \cdot 2^{1011416} - 1$	304471	L251	07	
285	$109 \cdot 2^{1011102} + 1$	304375	g423	09	
286	$9 \cdot 2^{1010277} - 1$	304125	L80	07	
287	$165 \cdot 2^{1010133} + 1$	304083	g196	07	
288	$729 \cdot 2^{1003373} - 1$	302049	L466	08	
289	$603 \cdot 2^{1002662} + 1$	301835	p219	07	
290	$945 \cdot 2^{1001719} + 1$	301551	p219	07	
291	$103 \cdot 2^{1001214} + 1$	301398	p219	07	
292	$869 \cdot 2^{1000725} + 1$	301252	p114	05	
293	$8009271 \cdot 2^{1000005} - 1$	301039	g396	09	
294	$1611111 \cdot 2^{1000000} + 1$	301037	p197	07	
295	$1089927 \cdot 2^{1000000} + 1$	301037	p197	06	
296	$32883 \cdot 2^{1000004} + 1$	301036	p86	02	
297	$21 \cdot 2^{999599} - 1$	300911	L56	05	
298	$215 \cdot 2^{999170} - 1$	300783	L323	08	
299	$81 \cdot 2^{998065} + 1$	300450	gt	07	
300	$335 \cdot 2^{997912} - 1$	300404	L769	09	
301	$243 \cdot 2^{997537} + 1$	300291	L165	08	
302	$1515 \cdot 2^{996848} - 1$	300085	L200	07	
303	$351351 \cdot 2^{996709} - 1$	300045	L80	06	
312	$2^{991961} - 2^{495981} + 1$	298611	x28	05	Gaussian Mersenne norm 36
351	$11 \cdot 2^{960901} + 1$	289262	g277	05	Divides Fermat $F(960897)$
359	$2 \cdot 827^{98511} + 1$	287407	g404	09	Divides $\Phi(827^{98511}, 2)$

rank	description	digits	who	year	comment
370	$143717 \cdot 96^{143717} + 1$	284892	g157	09	Generalized Cullen
405	$113 \cdot 2^{916801} + 1$	275987	L153	09	Divides $GF(916800, 5)$ , $GF(916800, 12)$
406	$3 \cdot 2^{916773} + 1$	275977	g245	01	Divides $GF(916771, 3)$ , $GF(916772, 10)$
442	$43 \cdot 2^{894766} + 1$	269354	g279	06	Divides $GF(894765, 5)$
460	$11 \cdot 2^{886071} + 1$	266735	g277	05	Divides $GF(886070, 12)$
508	$2^{859433} - 1$	258716	SG	94	Mersenne 33
525	$\text{Phi}(3, 1 - 3^{267414})/3$	255178	x28	05	Generalized unique
558	$35 \cdot 2^{831411} + 1$	250282	g279	06	Divides $GF(831410, 3)$
574	$229918 \cdot 12^{229918} - 1$	248129	x37	08	Generalized Woodall
580	$5 \cdot 2^{819739} + 1$	246767	g55	01	Divides $GF(819738, 3)$
596	$7 \cdot 2^{811230} + 1$	244206	g148	02	Divides $GF(811228, 5)$
610	$9980 \cdot 19^{189621} - 1$	242483	p237	08	Generalized Woodall
612	$7 \cdot 2^{804534} + 1$	242190	g196	03	Divides $GF(804533, 12)$
618	$3 \cdot 2^{801978} + 1$	241420	g372	05	Divides $GF(801973, 3)$ , $GF(801977, 5)$
665	$60205 \cdot 2^{782665} - 1$	235611	p243	09	Generalized Woodall
701	$67 \cdot 2^{773566} + 1$	232869	p227	08	Divides $GF(773564, 5)$
713	$35 \cdot 2^{768063} + 1$	231212	L126	05	Divides $GF(768062, 3)$
735	$2^{756839} - 1$	227832	SG	92	Mersenne 32
798	[ Long prime 798 ]	221071	x34	08	Generalized unique
823	$59 \cdot 2^{727815} + 1$	219096	p227	08	Divides $GF(727814, 12)$
889	$3 \cdot 2^{709968} + 1$	213723	g372	05	Divides $GF(709962, 3)$ , $GF(709963, 5)$
910	$75 \cdot 2^{705688} + 1$	212436	p227	08	Divides $GF(705684, 12)$
1006	$\text{Phi}(3, -2322573^{16384})$	208601	p72	08	Generalized unique
1007	$\text{Phi}(3, -2313516^{16384})$	208545	p72	08	Generalized unique
1031	$\text{Phi}(3, -2182528^{16384})$	207716	f7	07	Generalized unique
1033	$\text{Phi}(3, -2178996^{16384})$	207692	f7	07	Generalized unique
1036	$2 \cdot 683^{73237} + 1$	207585	g404	08	Divides $\text{Phi}(683^{73237}, 2)$
1047	$\text{Phi}(3, -2115084^{16384})$	207269	f7	07	Generalized unique
1049	$\text{Phi}(3, -2110199^{16384})$	207236	f7	07	Generalized unique
1058	$\text{Phi}(3, -2074507^{16384})$	206993	f7	07	Generalized unique
1067	$\text{Phi}(3, -2029827^{16384})$	206683	f7	06	Generalized unique
1075	$\text{Phi}(3, -1989801^{16384})$	206400	f7	06	Generalized unique
1079	$\text{Phi}(3, -3898771219232^{8192})$	206290	f14	07	Generalized unique
1084	$\text{Phi}(3, -3824990769800^{8192})$	206154	f14	07	Generalized unique
1085	$\text{Phi}(3, -3804263911368^{8192})$	206116	f14	07	Generalized unique
1086	$\text{Phi}(3, -1949616^{16384})$	206110	f7	06	Generalized unique
1089	$13 \cdot 2^{684560} + 1$	206075	g267	03	Divides $GF(684557, 10)$ , $GF(684559, 6)$
1091	$\text{Phi}(3, -3775889401250^{8192})$	206062	f14	07	Generalized unique
1092	$\text{Phi}(3, -3757143544200^{8192})$	206027	f14	07	Generalized unique
1095	$\text{Phi}(3, -1932045^{16384})$	205981	f7	06	Generalized unique
1096	$\text{Phi}(3, -1925507^{16384})$	205932	f7	06	Generalized unique
1100	$\text{Phi}(3, -1910944^{16384})$	205824	f7	06	Generalized unique
1212	$27 \cdot 2^{672007} + 1$	202296	g279	05	Divides Fermat $F(672005)$
1264	$667071 \cdot 2^{667071} - 1$	200815	g55	00	Woodall
1472	$2 \cdot 419^{76419} + 1$	200388	g404	07	Divides $\text{Phi}(419^{76419}, 2)$

rank	description	digits	who	year	comment
1531	$101670 \cdot 91^{101670} + 1$	199181	g157	05	Generalized Cullen
1621	$87258 \cdot 182^{87258} + 1$	197215	g392	06	Generalized Cullen
1671	$98035 \cdot 10^{196070} + 1$	196075	g157	07	Generalized Cullen
1842	$133736 \cdot 3^{401209} - 1$	191431	p120	04	Generalized Woodall
1856	$162454 \cdot 15^{162454} - 1$	191066	p242	09	Generalized Woodall
1925	$2 \cdot 191^{83009} + 1$	189347	g404	06	Divides $\Phi(191^{83009}, 2)$
1989	$146478 \cdot 19^{146478} - 1$	187315	p237	08	Generalized Woodall
2035	$659 \cdot 2^{617815} + 1$	185984	L732	09	Divides Fermat $F(617813)$
2146	$2 \cdot 131^{86365} + 1$	182859	g404	07	Divides $\Phi(131^{86365}, 2)$
2169	$225 \cdot 2^{605172} + 1$	182178	p43	05	Generalized Fermat, divides $GF(605169, 3)$
2233	$33 \cdot 2^{600270} + 1$	180701	L126	05	Divides $GF(600269, 5)$
2269	$999999999 \cdot 10^{180230} - 1$	180239	g208	08	Near-repdigit
2279	$10^{180054} + 8 \cdot R(58567) \cdot 10^{60744} + 1$	180055	p235	09	Tetradic palindrome
2282	$10^{180004} + 248797842 \cdot 10^{89998} + 1$	180005	D	07	Palindrome
2287	$163 \cdot 2^{597474} + 1$	179860	p43	05	Divides $GF(597473, 3)$
2375	$351 \cdot 2^{588325} + 1$	177107	L651	09	Divides $GF(588323, 6)$
2382	$36739 \cdot 2^{587827} - 1$	176959	p77	09	Generalized Woodall
2401	$195 \cdot 2^{585988} + 1$	176403	p189	07	Divides $GF(585985, 12)$ [K]
2416	$151 \cdot 2^{585044} + 1$	176118	L446	07	Divides Fermat $F(585042)$
2454	$10^{175108} + 230767032 \cdot 10^{87550} + 1$	175109	D	07	Palindrome
2536	$45 \cdot 2^{574506} + 1$	172946	g409	07	Divides $GF(574504, 3)$
2543	$1143 \cdot 2^{573894} + 1$	172763	L717	09	Divides $GF(573892, 3)$
2639	$519 \cdot 2^{567235} + 1$	170758	L656	09	Divides Fermat $F(567233)$
2672	$10^{170006} + 3880883 \cdot 10^{85000} + 1$	170007	D	06	Palindrome
2673	$392113\# + 1$	169966	p16	01	Primorial
2700	$13 \cdot 2^{562456} + 1$	169318	g267	03	Divides $GF(562454, 5)$
2707	$7 \cdot 2^{561816} + 1$	169125	g148	03	Divides $GF(561815, 5)$ ; $GF(561815, 6)$ [p149]
2806	$243 \cdot 2^{555984} + 1$	167371	L165	07	Divides $GF(555978, 3)$
2967	$347 \cdot 2^{544887} + 1$	164030	L679	09	Divides $GF(544886, 5)$
3121	$37510 \cdot 3^{337592} + 1$	161077	p126	06	Generalized Cullen
3167	$2 \cdot 1031^{53111} + 1$	160038	g404	09	Divides $\Phi(1031^{53111}, 2)$
3168	$10^{160016} + 8231328 \cdot 10^{80005} + 1$	160017	D	06	Palindrome
3240	$366439\# + 1$	158936	p16	01	Primorial
3278	$345 \cdot 2^{525977} + 1$	158338	g258	07	Divides $GF(525974, 6)$
3283	$11 \cdot 2^{525589} + 1$	158220	p116	03	Divides $GF(525588, 6)$
3406	$92278 \cdot 50^{92278} + 1$	156783	g157	08	Generalized Cullen
3485	$83660 \cdot 72^{83660} - 1$	155390	g265	03	Generalized Woodall
3559	$39 \cdot 2^{512997} + 1$	154430	g267	05	Divides $GF(512994, 5)$ ; $GF(512995, 6)$
3664	$2 \cdot 191^{66971} + 1$	152764	g404	06	Divides $\Phi(191^{66971}, 2)$
3687	$56271 \cdot 2^{506439} + 1$	152459	p243	09	Generalized Cullen
3966	$2 \cdot 431^{56947} + 1$	150026	g404	07	Divides $\Phi(431^{56947}, 2)$
3968	$10^{150008} + 4798974 \cdot 10^{75001} + 1$	150009	D	06	Palindrome
3970	$10^{150006} + 7426247 \cdot 10^{75000} + 1$	150007	p5	05	Palindrome
3992	$2 \cdot 1931^{45605} + 1$	149849	g404	07	Divides $\Phi(1931^{45605}, 2)$
4061	$243 \cdot 2^{495732} + 1$	149233	L165	07	Divides Fermat $F(495728)$ ; $GF(495726, 3)$ , $GF(495728, 6)$ ; $GF(495727, 12)$

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4090	$81778 \cdot 66^{81778} + 1$	148804	g157	07	Generalized Cullen
4160	$103444 \cdot 3^{310332} - 1$	148072	p260	09	Generalized Woodall
4429	$9265 \cdot 2^{482072} + 1$	145123	L635	09	Divides $GF(482070, 10)$
4434	$481899 \cdot 2^{481899} + 1$	145072	gm	98	Cullen
4481	$1995 \cdot 2^{479842} + 1$	144451	p240	09	Divides $GF(479838, 5)$
4493	$2 \cdot 599^{51983} + 1$	144380	g404	08	Divides $Phi(599^{51983}, 2)$
4543	$72048 \cdot 10^{144096} + 1$	144101	g157	05	Generalized Cullen
4633	$651 \cdot 2^{476632} + 1$	143484	L668	08	Divides Fermat $F(476624)$
4711	$34790! - 1$	142891	p85	02	Factorial
4718	$6841 \cdot 2^{474348} + 1$	142797	L1065	09	Divides $GF(474347, 10)$
4840	$89 \cdot 2^{472099} + 1$	142118	p114	04	Divides Fermat $F(472097)$
4979	$88195 \cdot 40^{88195} + 1$	141299	x37	09	Generalized Cullen
5158	$64872 \cdot 145^{64872} + 1$	140218	g142	05	Generalized Cullen
5202	$10^{140008} + 4546454 \cdot 10^{70001} + 1$	140009	D	05	Palindrome
5228	$2 \cdot 191^{61303} + 1$	139835	g404	06	Divides $Phi(191^{61303}, 2)$ [g187]
5271	$99 \cdot 10^{139670} - 1$	139672	p200	06	Near-repdigit
5302	$292340 \cdot 3^{292340} - 1$	139488	p120	04	Generalized Woodall
5305	$91848 \cdot 33^{91848} + 1$	139478	g157	06	Generalized Cullen
5345	$3911 \cdot 2^{462579} + 1$	139254	L679	09	Divides $GF(462577, 10)$
5415	$9 \cdot 2^{461081} + 1$	138801	g122	03	Divides Fermat $F(461076)$ , $GF(461077, 3)$ , $GF(461077, 6)$ , $GF(461077, 12)$
5439	$1791 \cdot 2^{460696} + 1$	138687	p240	09	Divides $GF(460693, 12)$
5498	$3203 \cdot 2^{459521} + 1$	138334	L687	09	Divides $GF(459520, 6)$
5527	$61813 \cdot 172^{61813} + 1$	138190	g407	07	Generalized Cullen
5543	$45 \cdot 2^{458712} + 1$	138088	L170	07	Divides $GF(458709, 5)$ , $GF(458710, 6)$ [K]
5670	$1061839 \cdot 2^{456790} - 1769267 \cdot 2^{340000} - 1$	137514	p97	07	Arithmetic progression ( $3, d = 1061839 \cdot 2^{456789} - 1769267 \cdot 2^{340000}$ )
5674	$1061839 \cdot 2^{456789} - 1$	137514	L81	05	Arithmetic progression ( $2, d = 1061839 \cdot 2^{456789} - 1769267 \cdot 2^{340000}$ )
5682	$4377 \cdot 2^{456708} + 1$	137487	L872	09	Divides $GF(456707, 10)$
5784	$76710 \cdot 61^{76710} + 1$	136958	g157	06	Generalized Cullen
6180	$62378 \cdot 141^{62378} + 1$	134069	g407	07	Generalized Cullen
6404	$74460 \cdot 59^{74460} + 1$	131863	g157	06	Generalized Cullen
6421	$2 \cdot 863^{44857} + 1$	131701	g404	08	Divides $Phi(863^{44857}, 2)$
6462	$9 \cdot 2^{435743} + 1$	131173	g122	03	Divides $GF(435742, 10)$
6529	$58897 \cdot 166^{58897} + 1$	130763	g407	07	Generalized Cullen
6591	$9999992 \cdot 10^{130127} - 1$	130134	p200	08	Near-repdigit
6609	$10^{130048} + (9 \cdot 10^{37077} - 2)/11 \cdot 10^{46486} + 1$	130049	p235	08	Tetradic palindrome
6614	$10^{130036} + 116010611 \cdot 10^{65014} + 1$	130037	D	04	Palindrome
6616	$10^{130022} + 3761673 \cdot 10^{65008} + 1$	130023	D	04	Palindrome
6632	$2 \cdot 683^{45797} + 1$	129809	g404	08	Divides $Phi(683^{45797}, 2)$
6693	$17 \cdot 2^{429319} - 197 \cdot 2^{202534} - 1$	129240	p162	05	Arithmetic progression ( $3, d = 17 \cdot 2^{429318} - 197 \cdot 2^{202534}$ )
6694	$17 \cdot 2^{429318} - 1$	129239	g267	03	Arithmetic progression ( $2, d = 17 \cdot 2^{429318} - 197 \cdot 2^{202534}$ ) [p162]

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6833	$10^{127590} + 10^{42297} \cdot (9 \cdot 10^{42997} - 2)/11 + 1$	127591	x40	09	Tetradic palindrome
6837	[ Long prime 6837 ]	127577	p185	06	Tetradic, palindrome
6888	$2 \cdot 23^{93337} + 1$	127100	gb1	06	Divides $\Phi(23^{93337}, 2)$
7027	$2 \cdot 4523^{34421} + 1$	125824	gb1	04	Divides $\Phi(4523^{34421}, 2)$
7030	$88900 \cdot 26^{88900} + 1$	125797	g157	05	Generalized Cullen
7058	$70615 \cdot 60^{70615} + 1$	125569	g157	08	Generalized Cullen
7072	$2 \cdot 359^{49071} + 1$	125382	g404	07	Divides $\Phi(359^{49071}, 2)$
7149	$2 \cdot 251^{51905} + 1$	124556	gb2	06	Divides $\Phi(251^{51905}, 2)$
7186	$61652 \cdot 103^{61652} - 1$	124101	p120	04	Generalized Woodall
7260	$1207 \cdot 2^{410108} + 1$	123458	g380	05	Divides Fermat $F(410105)$
7379	$2 \cdot 4079^{33873} + 1$	122301	gb2	07	Divides $\Phi(4079^{33873}, 2)$
7459	$15 \cdot 2^{403929} + 1$	121596	p114	02	Divides $GF(403927, 10)$
7532	$36635 \cdot 1960^{36635} - 1$	120617	p117	03	Generalized Woodall
7669	$10^{120016} + 1726271 \cdot 10^{60005} + 1$	120017	D	04	Palindrome
7670	$10^{120002} + 1617161 \cdot 10^{59998} + 1$	120003	D	04	Palindrome
7738	$3 \cdot 10^{119292} - 1$	119293	p135	06	Near-repdigit
7771	$69 \cdot 2^{394574} + 1$	118781	p219	08	Divides $GF(394572, 12)$
7888	$91850 \cdot 19^{91850} - 1$	117459	p237	08	Generalized Woodall
7998	$92711 \cdot 18^{92711} - 1$	116383	p242	09	Generalized Woodall
8021	$64227 \cdot 2^{385362} - 1$	116011	p77	03	Generalized Woodall
8139	$2 \cdot 491^{42801} + 1$	115182	g404	07	Divides $\Phi(491^{42801}, 2)$
8149	$3 \cdot 2^{382449} + 1$	115130	g132	99	Divides Fermat $F(382447)$ , $GF(382447, 3)$ , $GF(382447, 12)$ , $GF(382443, 6)$
8420	$119 \cdot 2^{376951} + 1$	113476	g233	06	Divides $GF(376950, 12)$
8491	$145359 \cdot 6^{145359} - 1$	113117	p234	08	Generalized Woodall
8531	$8511 \cdot 2^{374486} - 1$	112736	p77	03	Generalized Woodall
8708	$45 \cdot 2^{368554} - 405769059 \cdot 2^{180009} - 1$	110948	p108	03	Arithmetic progression ( $3, d = 45 \cdot 2^{368553} - 405769059 \cdot 2^{180009}$ )
8709	$45 \cdot 2^{368553} - 1$	110948	L4	03	Arithmetic progression ( $2, d = 45 \cdot 2^{368553} - 405769059 \cdot 2^{180009}$ ) [p108]
8859	$2^{364289} - 2^{182145} + 1$	109662	p58	01	Gaussian Mersenne norm 35
8913	$3 \cdot 2^{362765} + 1$	109204	g245	02	Divides $GF(362763, 12)$ , $GF(362764, 10)$
8925	$2 \cdot 8039^{27953} + 1$	109163	gb1	04	Divides $\Phi(8039^{27953}, 2)$
8977	$75 \cdot 2^{361614} + 1$	108859	p114	04	Divides $GF(361612, 10)$
8993	$361275 \cdot 2^{361275} + 1$	108761	DS	98	Cullen
9135	$995 \cdot 10^{107888} - 1$	107891	p218	07	Near-repdigit
9160	$26951! + 1$	107707	p65	02	Factorial
9167	$17883 \cdot 2^{357662} - 1$	107672	p103	03	Generalized Woodall
9168	$9 \cdot 10^{107663} - 1$	107664	p122	04	Near-repdigit
9324	$65555 \cdot 42^{65555} - 1$	106417	p239	08	Generalized Woodall
9591	$10^{105022} + 523111325 \cdot 10^{52507} + 1$	105023	D	08	Palindrome
9592	$10^{105018} + 920383029 \cdot 10^{52505} + 1$	105019	D	08	Palindrome
9593	$10^{105016} + 318939813 \cdot 10^{52504} + 1$	105017	D	08	Palindrome
9594	$10^{105014} + 682787286 \cdot 10^{52503} + 1$	105015	D	08	Palindrome
9595	$10^{105014} + 424787424 \cdot 10^{52503} + 1$	105015	D	08	Palindrome
9710	$10^{104281} - 10^{52140} - 1$	104281	p16	03	Near-repdigit, palindrome

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9901	$163 \cdot 2^{343190} + 1$	103313	g258	05	Divides $GF(343189, 10)$
10171	$1769267 \cdot 2^{340000} - 1$	102357	L4	03	Arithmetic progression ( $1, d = 1061839 \cdot 2^{456789} - 1769267 \cdot 2^{340000}$ )
10271	$485 \cdot 2^{338297} + 1$	101841	L203	07	Divides Fermat $F(338295)$ [K]
10657	$65516468355 \cdot 2^{333333} + 1$	100355	L923	09	Twin ( $p + 2$ )
10658	$65516468355 \cdot 2^{333333} - 1$	100355	L923	09	Twin ( $p$ )
11378	$28782838101 \cdot 2^{333333} - 1$	100354	L453	07	Arithmetic progression ( $3, d = 3371818539 \cdot 2^{333335}$ ) [g282]
11570	$26273597661 \cdot 2^{333333} - 1$	100354	L329	07	Arithmetic progression ( $3, d = 38478921 \cdot 2^{333341}$ ) [g282]
12432	$16422993885 \cdot 2^{333333} - 1$	100354	L392	07	Arithmetic progression ( $2, d = 38478921 \cdot 2^{333341}$ ) [g282]
12530	$15295563945 \cdot 2^{333333} - 1$	100354	L271	07	Arithmetic progression ( $2, d = 3371818539 \cdot 2^{333335}$ ) [g282]
12619	$14470366551 \cdot 2^{333333} - 1$	100354	L315	07	Arithmetic progression ( $1, d = 168667635 \cdot 2^{333334}$ ) [g348]
13287	$6572390109 \cdot 2^{333333} - 1$	100354	L255	07	Arithmetic progression ( $1, d = 38478921 \cdot 2^{333341}$ ) [g282]
13707	$1808289789 \cdot 2^{333333} - 1$	100353	L212	07	Arithmetic progression ( $1, d = 3371818539 \cdot 2^{333335}$ ) [g282]
13911	$54528 \cdot 69^{54528} - 1$	100274	p120	04	Generalized Woodall
13975	$10^{100000} - 10^{61403} - 1$	100000	p62	01	Near-repdigit
14423	$10^{95019} - 10^{47509} - 1$	95019	p16	03	Near-repdigit, palindrome
14502	$99999 \cdot 10^{94039} - 1$	94044	p199	06	Near-repdigit
14536	$891 \cdot 2^{311033} + 1$	93634	p114	05	Divides $GF(311032, 10)$
14675	$99999 \cdot 10^{92226} - 1$	92231	p199	06	Near-repdigit
14715	$9 \cdot 2^{304607} + 1$	91697	g23	98	Divides $GF(304604, 6)$
14754	$3 \cdot 2^{303093} + 1$	91241	Y	98	Divides Fermat $F(303088)$ ; $GF(303088, 3)$ , $GF(303086, 6)$ , $GF(303092, 10)$ , $GF(303088, 12)$ , $GF(303092, 5)$ [g0]
14850	$15 \cdot 2^{300488} + 1$	90458	p114	02	Divides $GF(300479, 6)$ , $GF(300484, 10)$
15197	$99995 \cdot 10^{87092} - 1$	87097	p199	06	Near-repdigit
15255	$211 \cdot 2^{287388} + 1$	86515	p43	04	Divides Fermat $F(287384)$
15384	$5 \cdot 10^{85142} - 1$	85143	g243	05	Near-repdigit
15388	$51 \cdot 2^{282719} + 1$	85109	g196	02	Divides Fermat $F(282717)$
15524	$21480! - 1$	83727	p65	01	Factorial
15619	$41 \cdot 2^{274897} + 1$	82754	g305	04	Divides $GF(274896, 10)$
15769	$63 \cdot 2^{270094} + 1$	81309	gt	02	Divides Fermat $F(270091)$
15843	$(10^{40293} - 1)^2 - 2$	80586	p48	04	Near-repdigit
16007	$262419 \cdot 2^{262419} + 1$	79002	DS	98	Cullen
16043	$5 \cdot 10^{78790} - 1$	78791	g243	05	Near-repdigit
16342	$648621027630345 \cdot 2^{253825} - 1$	76424	x24	09	Sophie Germain ( $2p + 1$ )
16343	$620366307356565 \cdot 2^{253825} - 1$	76424	x24	09	Sophie Germain ( $2p + 1$ )
16344	$648621027630345 \cdot 2^{253824} - 1$	76424	x24	09	Sophie Germain ( $p$ )
16345	$620366307356565 \cdot 2^{253824} - 1$	76424	x24	09	Sophie Germain ( $p$ )
16628	$8 \cdot 10^{74318} - 1$	74319	g243	04	Near-repdigit

rank	description	digits	who	year	comment
16690	$99995 \cdot 10^{73668} - 1$	73673	p199	06	Near-repdigit
16864	$10^{72500} - 7 \cdot 10^{25509} - 1$	72500	p48	03	Near-repdigit
17006	$96 \cdot 10^{71600} - 1$	71602	p194	06	Near-repdigit
17332	$99998 \cdot 10^{69842} - 1$	69847	p199	06	Near-repdigit
18201	$2^{216091} - 1$	65050	S	85	Mersenne 31
18412	$3 \cdot 2^{213321} + 1$	64217	Y	97	Divides Fermat $F(213319)$ ; $GF(213319, 5)$ , $GF(213316, 6)$ , $GF(213319, 12)$ [g0]
18581	$145823\# + 1$	63142	p21	00	Primorial
18856	$2^{203789} + 2^{101895} + 1$	61347	O	00	Gaussian Mersenne norm 34
18924	$197 \cdot 2^{202534} - 1$	60972	L40	04	Arithmetic progression $(1, d =$ $17 \cdot 2^{429318} - 197 \cdot 2^{202534})$ [p162]
20144	$2003663613 \cdot 2^{195000} + 1$	58711	L202	07	Twin $(p + 2)$
20145	$2003663613 \cdot 2^{195000} - 1$	58711	L202	07	Twin (p)
22060	$607095 \cdot 2^{176312} - 1$	53081	L983	09	Sophie Germain $(2p + 1)$
22061	$607095 \cdot 2^{176311} - 1$	53081	L983	09	Sophie Germain (p)
22556	$48047305725 \cdot 2^{172404} - 1$	51910	L99	07	Sophie Germain $(2p + 1)$
22557	$48047305725 \cdot 2^{172403} - 1$	51910	L99	07	Sophie Germain (p)
22655	$137211941292195 \cdot 2^{171961} - 1$	51780	x24	06	Sophie Germain $(2p + 1)$
22656	$194772106074315 \cdot 2^{171960} + 1$	51780	x24	07	Twin $(p + 2)$
22657	$194772106074315 \cdot 2^{171960} - 1$	51780	x24	07	Twin (p)
22658	$137211941292195 \cdot 2^{171960} - 1$	51780	x24	06	Sophie Germain (p)
22659	$100314512544015 \cdot 2^{171960} + 1$	51780	x24	06	Twin $(p + 2)$
22660	$100314512544015 \cdot 2^{171960} - 1$	51780	x24	06	Twin (p)
22661	$16869987339975 \cdot 2^{171960} + 1$	51779	x24	05	Twin $(p + 2)$
22662	$16869987339975 \cdot 2^{171960} - 1$	51779	x24	05	Twin (p)
23473	$33218925 \cdot 2^{169690} + 1$	51090	g259	02	Twin $(p + 2)$
23474	$33218925 \cdot 2^{169690} - 1$	51090	g259	02	Twin (p)
24205	$2^{160423} - 2^{80212} + 1$	48293	O	00	Gaussian Mersenne norm 33
24329	$\text{prim}V(40395, -1, 15588)$	47759	x23	07	Generalized Lucas primitive part
24398	$\text{prim}V(53394, -1, 15264)$	47200	CH4	07	Generalized Lucas primitive part
24667	$151023 \cdot 2^{151023} - 1$	45468	g25	98	Woodall
25437	$71509 \cdot 2^{143019} - 1$	43058	g23	98	Woodall, arithmetic progression $(2, d = (143018 \cdot 2^{83969} - 80047) \cdot$ $2^{59049})$ [x12]
26742	$2^{132049} - 1$	39751	S	83	Mersenne 30
27391	$33759183 \cdot 2^{123459} - 1$	37173	L527	09	Sophie Germain $(2p + 1)$
27392	$33759183 \cdot 2^{123458} - 1$	37173	L527	09	Sophie Germain (p)
27415	$(28839^{8317} - 1)/28838$	37090	CH6	06	Generalized repunit
27609	$7068555 \cdot 2^{121302} - 1$	36523	L100	05	Sophie Germain $(2p + 1)$
27610	$7068555 \cdot 2^{121301} - 1$	36523	L100	05	Sophie Germain (p)
27920	$307259241 \cdot 2^{115599} + 1$	34808	g336	09	Twin $(p + 2)$
27921	$307259241 \cdot 2^{115599} - 1$	34808	g336	09	Twin (p)
27954	$\text{prim}V(38513, -1, 11502)$	34668	x23	06	Generalized Lucas primitive part
27999	$2540041185 \cdot 2^{114730} - 1$	34547	g294	03	Sophie Germain $(2p + 1)$
28007	$2540041185 \cdot 2^{114729} - 1$	34547	g294	03	Sophie Germain (p)
28113	$60194061 \cdot 2^{114689} + 1$	34533	g294	02	Twin $(p + 2)$
28114	$60194061 \cdot 2^{114689} - 1$	34533	g294	02	Twin (p)
28167	$\text{prim}V(9008, 1, 16200)$	34168	x23	05	Generalized Lucas primitive part
28393	$2^{110503} - 1$	33265	WC	88	Mersenne 29

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28399	$108615 \cdot 2^{110342} + 1$	33222	L113	08	Twin ( $p + 2$ )
28400	$108615 \cdot 2^{110342} - 1$	33222	L113	08	Twin (p)
28794	$1124044292325 \cdot 2^{108000} - 1$	32524	L99	06	Sophie Germain ( $2p + 1$ )
28795	$1124044292325 \cdot 2^{107999} - 1$	32523	L99	06	Sophie Germain (p)
28796	$112886032245 \cdot 2^{108001} - 1$	32523	L99	06	Sophie Germain ( $2p + 1$ )
28797	$112886032245 \cdot 2^{108000} - 1$	32523	L99	06	Sophie Germain (p)
28879	$1765199373 \cdot 2^{107520} + 1$	32376	g182	02	Twin ( $p + 2$ )
28880	$1765199373 \cdot 2^{107520} - 1$	32376	g182	02	Twin (p)
29731	$318032361 \cdot 2^{107001} + 1$	32220	p100	01	Twin ( $p + 2$ )
29732	$318032361 \cdot 2^{107001} - 1$	32220	p100	01	Twin (p)
29769	$2^{106693} + 2^{53347} + 1$	32118	O	00	Gaussian Mersenne norm 32
29925	$532323 \cdot 2^{104390} + 1$	31431	L983	09	Cunningham chain 2nd kind ( $2p - 1$ )
29926	$532323 \cdot 2^{104389} + 1$	31430	L983	09	Cunningham chain 2nd kind (p)
30008	$\text{primV}(10987, 1, 14400)$	31034	x25	05	Generalized Lucas primitive part
30241	$156733989 \cdot 2^{100007} + 1$	30114	L95	08	Twin ( $p + 2$ )
30242	$156733989 \cdot 2^{100007} - 1$	30114	L95	08	Twin (p)
30249	$1046619117 \cdot 2^{100000} + 1$	30113	L467	07	Twin ( $p + 2$ )
30250	$1046619117 \cdot 2^{100000} - 1$	30113	L467	07	Twin (p)
30387	$49363 \cdot 2^{98727} - 1$	29725	Y	97	Woodall
30391	$U(2341, -1, 8819)$	29712	x25	08	Generalized Lucas number
30900	$18912879 \cdot 2^{98396} - 1$	29628	p94	02	Sophie Germain ( $2p + 1$ )
30901	$18912879 \cdot 2^{98395} - 1$	29628	p94	02	Sophie Germain (p)
30997	$1807318575 \cdot 2^{98305} + 1$	29603	g216	01	Twin ( $p + 2$ )
30998	$1807318575 \cdot 2^{98305} - 1$	29603	g216	01	Twin (p)
31909	$\text{primV}(24127, -1, 6718)$	29433	CH3	05	Generalized Lucas primitive part
32091	$744678855 \cdot 2^{95000} + 1$	28607	L922	09	Twin ( $p + 2$ )
32092	$744678855 \cdot 2^{95000} - 1$	28607	L922	09	Twin (p)
32100	$\text{primV}(205011)$	28552	x39	09	Lucas primitive part
32131	$U(16531, 1, 6721) -$ $U(16531, 1, 6720)$	28347	x36	07	Lehmer number
32175	$581627055 \cdot 2^{93182} + 1$	28060	p35	09	Cunningham chain 2nd kind ( $2p - 1$ )
32176	$581627055 \cdot 2^{93181} + 1$	28060	p35	09	Cunningham chain 2nd kind (p)
32311	$90825 \cdot 2^{90825} + 1$	27347	Y	97	Cullen
32474	$\text{primV}(5673, 1, 13500)$	27028	CH3	05	Generalized Lucas primitive part
32588	$3364553235 \cdot 2^{88889} - 1$	26768	L652	09	Sophie Germain ( $2p + 1$ )
32589	$3364553235 \cdot 2^{88888} - 1$	26768	L652	09	Sophie Germain (p)
32590	$\text{primV}(44368, 1, 9504)$	26768	CH3	05	Generalized Lucas primitive part
32637	$(3429^{7549} - 1)/3428$	26684	c13	09	Generalized repunit
32841	$\text{primV}(10986, -1, 9756)$	26185	x23	05	Generalized Lucas primitive part
32925	$2^{86243} - 1$	25962	S	82	Mersenne 28
32942	$\text{primV}(11076, -1, 12000)$	25885	x25	05	Generalized Lucas primitive part
33022	$2^{85237} + 2^{42619} + 1$	25659	x16	00	Gaussian Mersenne norm 31
33153	$\text{primV}(42, -1, 23376)$	25249	x23	07	Generalized Lucas primitive part
33189	$\text{primV}(7577, -1, 10692)$	25140	x33	07	Generalized Lucas primitive part
33195	$\text{primV}(44573, -1, 10125)$	25105	CH4	07	Generalized Lucas primitive part
33211	$1035928263 \cdot 2^{83200} + 1$	25055	p252	09	Twin ( $p + 2$ )
33212	$1035928263 \cdot 2^{83200} - 1$	25055	p252	09	Twin (p)
33217	$10495740081 \cdot 2^{83126} - 1$	25034	L99	06	Sophie Germain ( $2p + 1$ )

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33218	$10495740081 \cdot 2^{83125} - 1$	25034	L99	06	Sophie Germain (p)
33219	$7473214125 \cdot 2^{83125} + 1$	25033	L99	06	Twin ( $p + 2$ )
33220	$7473214125 \cdot 2^{83125} - 1$	25033	L99	06	Twin (p)
33221	$11694962547 \cdot 2^{83124} + 1$	25033	L99	06	Twin ( $p + 2$ )
33222	$11694962547 \cdot 2^{83124} - 1$	25033	L99	06	Twin (p)
33223	$58950603 \cdot 2^{83130} + 1$	25033	L99	06	Twin ( $p + 2$ )
33224	$58950603 \cdot 2^{83130} - 1$	25033	L99	06	Twin (p)
33308	$1030739199 \cdot 2^{82019} + 1$	24700	g258	09	Twin ( $p + 2$ )
33309	$1030739199 \cdot 2^{82019} - 1$	24700	g258	09	Twin (p)
33311	$61078155 \cdot 2^{82003} - 1$	24694	L99	06	Sophie Germain ( $2p + 1$ )
33312	$61078155 \cdot 2^{82002} - 1$	24693	L99	06	Sophie Germain (p)
33315	$\text{prim}V(19285, 1, 10800)$	24683	x25	05	Generalized Lucas primitive part
33358	$(13096^{5953} - 1)/13095$	24506	CH6	07	Generalized repunit
33382	$1213822389 \cdot 2^{81132} - 1$	24433	g250	02	Sophie Germain ( $2p + 1$ )
33383	$1213822389 \cdot 2^{81131} - 1$	24432	g250	02	Sophie Germain (p)
33403	$\text{prim}V(2425, 1, 13500)$	24370	x23	06	Generalized Lucas primitive part
34007	$3853775193 \cdot 2^{80001} + 1$	24093	L109	07	Cunningham chain 2nd kind ( $2p - 1$ )
34010	$3853775193 \cdot 2^{80000} + 1$	24092	L109	07	Cunningham chain 2nd kind (p)
34119	$\text{prim}V(14261, 1, 10800)$	23928	x23	05	Generalized Lucas primitive part
34131	$\text{prim}V(13964, 1, 8856)$	23876	CH3	05	Generalized Lucas primitive part
34147	$\text{prim}V(3464, 1, 6722)$	23786	x23	06	Generalized Lucas primitive part
34189	$1504084599 \cdot 2^{78342} + 1$	23593	g290	04	Cunningham chain 2nd kind ( $2p - 1$ )
34190	$964487139 \cdot 2^{78342} + 1$	23593	g290	04	Cunningham chain 2nd kind ( $2p - 1$ )
34191	$1504084599 \cdot 2^{78341} + 1$	23593	g290	04	Cunningham chain 2nd kind (p)
34192	$964487139 \cdot 2^{78341} + 1$	23592	g290	04	Cunningham chain 2nd kind (p)
34200	$6917! - 1$	23560	g1	98	Factorial
34236	$(89^{11971} - 1)/88$	23335	CH2	09	Generalized repunit
34238	$(23151^{5347} - 1)/23150$	23333	c13	08	Generalized repunit
34253	$2^{77291} + 2^{38646} + 1$	23267	O	00	Gaussian Mersenne norm 30
34276	$\text{prim}V(3711, 1, 9882)$	23131	x25	05	Generalized Lucas primitive part
34294	$(5855^{6121} - 1)/5854$	23058	CH1	05	Generalized repunit
34357	$\text{prim}V(20384, 1, 5281)$	22754	x25	03	Generalized Lucas primitive part, cyclotomy
34450	$64670473 \cdot 2^{74147} + 3$	22329	g422	09	Sophie Germain ( $2p + 1$ )
34451	$64670473 \cdot 2^{74146} + 1$	22328	L446	09	Sophie Germain (p)
34499	$232197 \cdot 2^{73458} - 1$	22119	L983	09	Sophie Germain ( $2p + 1$ )
34500	$232197 \cdot 2^{73457} - 1$	22119	L983	09	Sophie Germain (p)
34619	$U(19258, -1, 5039)$	21586	x23	07	Generalized Lucas number
34643	$398901 \cdot 2^{71470} - 1$	21521	L983	09	Sophie Germain ( $2p + 1$ )
34644	$398901 \cdot 2^{71469} - 1$	21520	L983	09	Sophie Germain (p)
34646	$6380! + 1$	21507	g1	98	Factorial
34757	$U(15631, 1, 5040) -$ $U(15631, 1, 5039)$	21134	x25	03	Lehmer number
34773	$2566851867 \cdot 2^{70002} - 1$	21083	L109	07	Sophie Germain ( $2p + 1$ )
34775	$2566851867 \cdot 2^{70001} - 1$	21082	L109	07	Sophie Germain (p)
34913	[ Long prime 34913 ]	20562	FE1	06	ECPP, Mills' prime
34973	$U(11200, -1, 5039)$	20400	x25	04	Generalized Lucas number, cy- clotomy

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35099	$1040131975 \cdot 2^{66459} + 3$	20016	g258	07	Sophie Germain ( $2p + 1$ )
35100	$1040131975 \cdot 2^{66458} + 1$	20015	g258	07	Sophie Germain (p)
35210	$(9473^{4969} - 1)/9472$	19756	CH2	08	Generalized repunit
36096	$(14261^{4663} - 1)/14260$	19367	c13	07	Generalized repunit
36267	$U(6584, -1, 5039)$	19238	x23	07	Generalized Lucas number
36364	$(13782^{4591} - 1)/13781$	19000	c13	07	Generalized repunit
36386	$(15637^{4513} - 1)/15636$	18925	c13	07	Generalized repunit
36672	$42209\# + 1$	18241	p8	99	Primorial
37212	$7457 \cdot 2^{59659} + 1$	17964	Y	97	Cullen
37234	$(18067^{4201} - 1)/18066$	17879	c13	02	Generalized repunit
37470	$(19026^{4051} - 1)/19025$	17332	c13	08	Generalized repunit
37509	$U(9657, 1, 4321) -$ $U(9657, 1, 4320)$	17215	x23	05	Lehmer number
37559	$U(81839)$	17103	p54	01	Fibonacci number
37602	$(4735^{4621} - 1)/4734$	16980	CH3	05	Generalized repunit
37630	$(11031^{4177} - 1)/11030$	16882	p54	05	Generalized repunit
37761	$U(15823, 1, 3960) -$ $U(15823, 1, 3959)$	16625	x25	02	Lehmer number, cyclotomy
37826	$U(10803, 1, 4081) -$ $U(10803, 1, 4080)$	16457	x25	05	Lehmer number, cyclotomy
37862	$U(11091, -1, 4049)$	16375	CH3	05	Generalized Lucas number
37943	$U(2554, -1, 4751)$	16185	CH3	05	Generalized Lucas number
37966	$U(1599, -1, 5039)$	16141	x23	07	Generalized Lucas number
38027	$U(10853, 1, 3960) +$ $U(10853, 1, 3959)$	15977	x25	02	Lehmer number, cyclotomy
38217	$U(9667, 1, 3960) -$ $U(9667, 1, 3959)$	15778	x25	02	Lehmer number, cyclotomy
38238	$U(14257, -1, 3779)$	15694	x25	04	Generalized Lucas number, cyclotomy
38304	[ Long prime 38304 ]	15537	x38	09	Lehmer primitive part
38341	$(15134^{3697} - 1)/15133$	15450	CH6	07	Generalized repunit
38433	$(16339^{3613} - 1)/16338$	15219	c13	08	Generalized repunit
38614	$2638^{4405} + 4405^{2638}$	15071	FE3	04	ECPP
39322	$(4018^{4177} - 1)/4017$	15051	c13	08	Generalized repunit
39326	$(7372^{3889} - 1)/7371$	15038	CH6	07	Generalized repunit
39388	$U(8747, 1, 3780) +$ $U(8747, 1, 3779)$	14897	x25	05	Lehmer number
39393	$(2147483647^{1597} -$ $1)/1361551397315358942$	14885	FE7	09	ECPP
39419	$U(25700, 1, 3360) +$ $U(25700, 1, 3359)$	14813	x25	04	Lehmer number, cyclotomy
39420	$2^{49207} - 2^{24604} + 1$	14813	x16	00	Gaussian Mersenne norm 29
39491	$(15679^{3499} - 1)/15678$	14676	x25	03	Generalized repunit
39498	$U(1493, -1, 4621)$	14665	CH3	05	Generalized Lucas number
39513	$U(4951, 1, 3960) -$ $U(4951, 1, 3959)$	14628	CH3	05	Lehmer number
39548	$(2728^{4231} - 1)/2727$	14534	c13	07	Generalized repunit
39690	$U(12924, -12925, 3499)$	14382	x25	05	Generalized Lucas number
39745	$U(12113, -1, 3499)$	14284	CH3	05	Generalized Lucas number
39752	$U(5192, 1, 3841) -$ $U(5192, 1, 3840)$	14267	x23	05	Lehmer number

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39769	$U(2441, -1, 4201)$	14228	CH3	05	Generalized Lucas number
39775	$U(3865, 1, 3960) +$ $U(3865, 1, 3959)$	14202	x25	02	Lehmer number, cyclotomy
40206	$U(3645, 1, 3841) -$ $U(3645, 1, 3840)$	13677	x25	05	Lehmer number
40354	$U(11194, -11195, 3361)$	13605	x25	04	Generalized Lucas number
40472	$U(2219, -1, 4049)$	13546	CH3	05	Generalized Lucas number
40552	$U(475, -1, 5039)$	13486	x25	03	Generalized Lucas number, cyclotomy
40875	$U(7644, 1, 3421) -$ $U(7644, 1, 3420)$	13281	CH3	05	Lehmer number
41059	$U(10206, 1, 3276) -$ $U(10206, 1, 3275)$	13130	x23	05	Lehmer number
41187	$U(7537, -7538, 3361)$	13028	x23	07	Generalized Lucas number
41193	$U(7512, -7513, 3361)$	13023	x25	04	Generalized Lucas number
41209	$U(2783, -1, 3779)$	13014	CH3	05	Generalized Lucas number
41282	$U(7128, -1, 3361)$	12946	x25	04	Generalized Lucas number, cyclotomy
41358	$(2^{42737} + 1)/3$	12865	M	07	ECPP, generalized Lucas number, Wagstaff
41362	$U(12159, 1, 3150) -$ $U(12159, 1, 3149)$	12864	x25	05	Lehmer number, cyclotomy
41430	$U(5485, 1, 3421) +$ $U(5485, 1, 3420)$	12788	CH3	05	Lehmer number
41541	$(V(49596, 1, 3375) + 1)/(V(49596, 1, 675) + 1)$	12678	x25	06	Lehmer primitive part
41630	$(V(47025, 1, 3375) - 1)/(V(47025, 1, 675) - 1)$	12616	x25	06	Lehmer primitive part
41709	$(V(44524, 1, 3375) - 1)/(V(44524, 1, 675) - 1)$	12552	x23	06	Lehmer primitive part
41789	$U(6393, 1, 3276) -$ $U(6393, 1, 3275)$	12464	x25	05	Lehmer number, cyclotomy
42038	$(V(37511, 1, 3375) - 1)/(V(37511, 1, 675) - 1)$	12351	x25	06	Lehmer primitive part
42172	$(V(32362, 1, 3375) + 1)/(V(32362, 1, 675) + 1)$	12178	x23	06	Lehmer primitive part
42185	$U(4857, 1, 3300) -$ $U(4857, 1, 3299)$	12162	x25	05	Lehmer number, cyclotomy
42584	$(V(30226, 1, 3375) - 1)/(V(30226, 1, 675) - 1)$	12098	x25	06	Lehmer primitive part
42726	$primV(57724)$	12063	p54	01	Lucas primitive part, cyclotomy
42885	$U(5989, 1, 3169) -$ $U(5989, 1, 3168)$	11967	x25	05	Lehmer number
42889	$111871891 \cdot 27751\# + 1$	11961	p155	08	Arithmetic progression ( $4, d = 3624707 \cdot 27751\#$ )
42892	$103098395 \cdot 27751\# + 1$	11961	p155	07	Arithmetic progression ( $4, d = 809963 \cdot 27751\#$ )
42893	$102293041 \cdot 27751\# + 1$	11961	p155	07	Arithmetic progression ( $4, d = 412064 \cdot 27751\#$ )
43145	$V(56003)$	11704	p193	06	Lucas number

rank	description	digits	who	year	comment
43366	$primU(67825)$	11336	x23	07	Fibonacci primitive part
43404	$3610! - 1$	11277	C	93	Factorial
43590	$(V(11258, 1, 3375) + 1)/(V(11258, 1, 675) + 1)$	10939	x23	06	Lehmer primitive part
43606	$3507! - 1$	10912	C	92	Factorial
43623	$(V(10638, 1, 3375) - 1)/(V(10638, 1, 675) - 1)$	10873	x25	06	Lehmer primitive part
43668	$(V(983, 1, 3609) - 1)/(V(983, 1, 9) - 1)$	10774	x23	06	Lehmer primitive part
43694	$primV(77058)$	10729	CH3	05	Lucas primitive part
43696	$(V(9352, 1, 3375) + 1)/(V(9352, 1, 675) + 1)$	10722	x25	05	Lehmer primitive part
43709	$V(51169)$	10694	p54	01	Lucas number
43749	$U(50833)$	10624	CH4	05	Fibonacci number
43795	$46915147 \cdot 2^{35000} + 1$	10544	p43	07	Arithmetic progression ( $4, d = 9548007 \cdot 2^{35000}$ )
43841	$(V(7792, 1, 3375) - 1)/(V(7792, 1, 675) - 1)$	10508	x25	06	Lehmer primitive part
43844	$primV(77841)$	10496	x25	05	Lucas primitive part
43854	$(V(812, 1, 3609) + 1)/(V(812, 1, 9) + 1)$	10475	x25	06	Lehmer primitive part
43903	$24029\# + 1$	10387	C	93	Primorial
43928	$6 \cdot Bern(4306)/2153$	10342	FE8	09	Irregular, ECPP
43964	$23801\# + 1$	10273	C	93	Primorial
43986	$59056921173 \cdot 2^{34030} + 7$	10255	FE6	09	ECPP
44057	[ Long prime 44057 ]	10136	x38	09	Lehmer primitive part
44082	$1234^{3265} + 3265^{1234}$	10094	FE1	05	ECPP
44094	$Phi(427, -10^{28})$	10081	FE9	09	Unique, ECPP
44102	$2739^{2930} + 2930^{2739}$	10073	FE1	05	ECPP
44116	$2072644824759 \cdot 2^{33333} + 5$	10047	FE5	08	Triplet (3), ECPP
44117	$2072644824759 \cdot 2^{33333} + 1$	10047	L645	08	Triplet (2)
44118	$2072644824759 \cdot 2^{33333} - 1$	10047	L645	08	Triplet (1)
44158	$409331735 \cdot 2^{33333} + 1$	10043	p155	07	Arithmetic progression ( $4, d = 104086947 \cdot 2^{33333}$ )
44190	$648^{3571} + 3571^{648}$	10041	M	03	ECPP
44411	$10^{9999} + 33603$	10000	FE2	03	ECPP
44444	[ Long prime 44444 ]	9965	x38	09	Lehmer primitive part
44519	$(V(8259, 1, 2517) - 1)/(V(8259, 1, 3) - 1)$	9848	x25	05	Lehmer primitive part
44554	$32469 \cdot 2^{32469} + 1$	9779	MM	97	Cullen
44581	$8073 \cdot 2^{32294} + 1$	9726	MM	97	Cullen
44682	[ Long prime 44682 ]	9548	x38	09	Lehmer primitive part
44865	$V(44507)$	9302	CH3	05	Lucas number
45029	$2658^{2659} + 2659^{2658}$	9106	FE1	05	ECPP
45054	$13^{8148} + 2716^{2197}$	9077	M	05	ECPP
45139	$(V(2247, 1, 3375) - 1)/(V(2247, 1, 675) - 1)$	9050	x25	06	Lehmer primitive part
45224	$(V(3798, 1, 2529) - 1)/(V(3798, 1, 9) - 1)$	9021	x25	06	Lehmer primitive part
45227	$2319^{2680} + 2680^{2319}$	9020	M	04	ECPP

rank	description	digits	who	year	comment
45229	$(V(8162, 1, 2307) - 1)/(V(8162, 1, 3) - 1)$	9013	x25	05	Lehmer primitive part
45279	$2^{29727} + 20273$	8949	c18	09	ECPP
46022	$2^{27529} - 2^{13765} + 1$	8288	O	00	Gaussian Mersenne norm 28
46098	$primV(39124)$	8176	CH3	05	Lucas primitive part
46099	$379185609 \cdot 2^{27129} - 1$	8176	L983	09	Cunningham chain $(4p + 3)$
46101	$379185609 \cdot 2^{27128} - 1$	8175	L983	09	Cunningham chain $(2p + 1)$
46102	$379185609 \cdot 2^{27127} - 1$	8175	L983	09	Cunningham chain $(p)$
46146	[ Long prime 46146 ]	8125	c13	09	ECPP
46157	$1647^{2518} + 2518^{1647}$	8100	FE1	05	ECPP
46185	$197^{3514} + 3514^{197}$	8063	M	04	ECPP
46201	$1995^{2438} + 2438^{1995}$	8046	FE1	03	ECPP
46245	$18523\# + 1$	8002	D	89	Primorial
46294	$164210699973 \cdot 2^{26328} - 1$	7937	p158	06	Cunningham chain $(4p + 3)$
46296	$164210699973 \cdot 2^{26327} - 1$	7937	p158	06	Cunningham chain $(2p + 1)$
46297	$164210699973 \cdot 2^{26326} - 1$	7937	p158	06	Cunningham chain $(p)$
46355	$U(37511)$	7839	x13	05	Fibonacci number
46428	$-E(2762)/2670541$	7760	c11	04	Euler irregular, ECPP
46512	$V(36779)$	7687	CH3	05	Lucas number
46929	$197418203 \cdot 2^{25000} + 6089$	7535	FE4	05	ECPP, consecutive primes arithmetic progression $(3, d = 6090)$
46930	$197418203 \cdot 2^{25000} - 1$	7535	p164	05	Consecutive primes arithmetic progression $(2, d = 6090)$
46931	$197418203 \cdot 2^{25000} - 6091$	7535	FE4	05	ECPP, consecutive primes arithmetic progression $(1, d = 6090)$
46983	$U(35999)$	7523	p54	01	Fibonacci number, cyclotomy
47002	$Phi(4029, -1000)$	7488	c47	09	Unique, ECPP
47093	$V(35449)$	7409	p12	01	Lucas number
47098	$87 \cdot 2^{24582} + 2579$	7402	c31	04	ECPP, consecutive primes arithmetic progression $(3, d = 1290)$
47099	$87 \cdot 2^{24582} + 1289$	7402	c31	04	ECPP, consecutive primes arithmetic progression $(2, d = 1290)$
47100	$87 \cdot 2^{24582} - 1$	7402	g106	99	Consecutive primes arithmetic progression $(1, d = 1290)$ [c31]
47349	$V(34759)/27112021$	7257	c33	05	Lucas cofactor, ECPP
47540	$Phi(9455, -10)$	7200	c33	05	Unique, ECPP
47585	$Phi(1479, -100000000)$	7168	c47	09	Unique, ECPP
48225	$164084347 \cdot 16229\# + 1$	7009	p155	09	Arithmetic progression $(5, d = 20333209 \cdot 16229\#)$
48330	$primA(82975)$	6935	p54	01	Lucas Aurifeuillian primitive part
48341	$23005 \cdot 2^{23005} - 1$	6930	Y	97	Woodall
48354	$22971 \cdot 2^{22971} - 1$	6920	Y	97	Woodall
48360	$2852851249 \cdot 16001\#/5 + 1$	6913	p199	08	Arithmetic progression $(5, d = 2653152 \cdot 16001\#)$
48365	$2399771561 \cdot 16001\#/5 + 1$	6913	p199	08	Arithmetic progression $(5, d = 86574302 \cdot 16001\#)$
48367	$1638535589 \cdot 16001\#/5 + 1$	6913	p199	08	Arithmetic progression $(5, d = 2003735 \cdot 16001\#)$
48374	$Phi(2405, -10000)$	6912	c47	09	Unique, ECPP

rank	description	digits	who	year	comment
48444	$15877\# - 1$	6845	CD	92	Primorial
48449	$\text{Phi}(10887, 10)$	6841	c33	05	Unique, ECPP
48527	$\text{prim}V(48381)$	6741	x23	05	Lucas primitive part
48530	$\text{prim}U(40295)$	6737	p12	01	Fibonacci primitive part
48660	$\text{prim}V(39700)$	6621	p54	01	Lucas primitive part
48918	$U(30757)$	6428	p54	01	Fibonacci number, cyclotomy
48965	$U(30671)/1141737296775689$	6395	c41	05	Fibonacci cofactor, ECPP
49121	$\text{Phi}(7357, -10)$	6301	c33	04	Unique, ECPP
49183	$\text{Phi}(6437, 10)$	6240	c47	08	Unique, ECPP
49195	[ Long prime 49195 ]	6229	c4	09	Mersenne cofactor, ECPP
49202	$5612052289 \cdot 14489\#/5 + 5$	6223	c18	08	Triplet (3), ECPP
49203	$5612052289 \cdot 14489\#/5 + 1$	6223	p41	08	Triplet (2)
49204	$5612052289 \cdot 14489\#/5 - 1$	6223	p41	08	Triplet (1)
49339	$4811 \cdot 2^{20219} + 1$	6091	DM	96	Consecutive primes arithmetic progression ( $3, d = 3738$ ) [c36]
49340	$4811 \cdot 2^{20219} - 3737$	6091	c36	04	ECPP, consecutive primes arithmetic progression ( $2, d = 3738$ )
49341	$4811 \cdot 2^{20219} - 7475$	6091	c36	04	ECPP, consecutive primes arithmetic progression ( $1, d = 3738$ )
49424	$\text{prim}V(29657)$	6057	c11	09	Lucas primitive part, ECPP
49482	$3020255265 \cdot 2^{20025} - 1$	6038	p133	05	Cunningham chain ( $4p + 3$ )
49484	$3020255265 \cdot 2^{20024} - 1$	6038	p133	05	Cunningham chain ( $2p + 1$ )
49485	$3020255265 \cdot 2^{20023} - 1$	6038	p133	05	Cunningham chain (p)
49615	$\text{prim}V(28844)$	6028	p12	01	Lucas primitive part
49896	$13649\# + 1$	5862	D	87	Primorial
50078	$18885 \cdot 2^{18885} - 1$	5690	K	87	Woodall
50220	$1963! - 1$	5614	CD	92	Factorial
50225	$13033\# - 1$	5610	CD	92	Primorial
50243	$p(25235715)$	5588	c46	09	Partitions, ECPP
50258	$p(25102542)$	5574	c39	09	Partitions, ECPP
50260	$289 \cdot 2^{18502} + 1$	5573	K	84	Cullen, generalized Fermat
50339	$p(24512858)$	5508	c42	07	Partitions, ECPP
50341	$p(24503300)$	5507	c42	07	Partitions, ECPP
50517	$387977793 \cdot 2^{17866} + 1$	5387	L983	09	Cunningham chain 2nd kind ( $4p - 3$ )
50864	$U(25561)$	5342	p54	01	Fibonacci number
50896	$p(23028252)$	5338	c42	08	Partitions, ECPP
50912	$p(23010067)$	5336	c42	07	Partitions, ECPP
50923	$\text{prim}V(25504)$	5324	F3	01	Lucas primitive part, APR-CL assisted
50938	$p(22857207)$	5318	c46	09	Partitions, ECPP
50952	$p(22810361)$	5313	c46	09	Partitions, ECPP
50979	[ Long prime 50979 ]	5274	c4	09	Mersenne cofactor, ECPP
51002	$p(22312025)$	5254	c39	07	Partitions, ECPP
51195	$2366867925 \cdot 2^{17208} + 1$	5190	p133	04	Cunningham chain 2nd kind ( $4p - 3$ )
51285	[ Long prime 51285 ]	5132	p179	06	Triplet (3)
51286	[ Long prime 51286 ]	5132	p179	06	Triplet (2)
51287	[ Long prime 51287 ]	5132	p179	06	Triplet (1)
51288	[ Long prime 51288 ]	5132	p179	06	Triplet (3)

rank	description	digits	who	year	comment
51289	[ Long prime 51289 ]	5132	p179	06	Triplet (2)
51290	[ Long prime 51290 ]	5132	p179	06	Triplet (1)
51291	[ Long prime 51291 ]	5132	p179	06	Consecutive primes arithmetic progression (3, $d = 6$ )
51292	[ Long prime 51292 ]	5132	p179	06	Consecutive primes arithmetic progression (2, $d = 6$ )
51293	[ Long prime 51293 ]	5132	p179	06	Consecutive primes arithmetic progression (1, $d = 6$ )
51294	[ Long prime 51294 ]	5132	p179	05	Triplet (3)
51295	[ Long prime 51295 ]	5132	p179	05	Triplet (2)
51296	[ Long prime 51296 ]	5132	p179	05	Triplet (1)
51300	[ Long prime 51300 ]	5132	p179	05	Consecutive primes arithmetic progression (3, $d = 6$ )
51301	[ Long prime 51301 ]	5132	p179	05	Consecutive primes arithmetic progression (2, $d = 6$ )
51302	[ Long prime 51302 ]	5132	p179	05	Consecutive primes arithmetic progression (1, $d = 6$ )
51303	[ Long prime 51303 ]	5132	p179	07	Arithmetic progression (5, $d = (681402540 \cdot 205881 \cdot 4001\# \cdot (205881 \cdot 4001\# + 1) \cdot (205881 \cdot 4001\# - 1)/35)$ )
51397	$(2^{17029} - 1)/418879343$	5118	c8	06	Mersenne cofactor, ECPP
51525	$33957462 \cdot \text{Bern}(2370)/40685$	5083	c11	03	Irregular, ECPP
51815	$\text{prim}V(24998)$	5033	c48	08	Lucas primitive part, ECPP
52035	$16219299585 \cdot 2^{16614} - 1$	5012	p158	05	Cunningham chain ( $4p + 3$ )
52036	$16219299585 \cdot 2^{16613} - 1$	5012	p158	05	Cunningham chain ( $2p + 1$ )
52037	$16219299585 \cdot 2^{16612} - 1$	5011	p158	05	Cunningham chain (p)
52239	$p(20186952)$	4998	c46	09	Partitions, ECPP
52270	$\text{prim}A(95475)$	4966	c4	09	Lucas Aurifeuillian primitive part, ECPP
52282	$11549\# + 1$	4951	D	86	Primorial
52283	$\text{prim}V(24383)$	4951	c4	09	Lucas primitive part, ECPP
52743	$\text{prim}V(27167)$	4866	c4	09	Lucas primitive part, ECPP
52777	$\text{prim}V(28940)$	4836	c4	09	Lucas primitive part, ECPP
52797	$2288999415 \cdot 2^{15939} - 1$	4808	p133	04	Cunningham chain ( $4p + 3$ )
52798	$2288999415 \cdot 2^{15938} - 1$	4808	p133	04	Cunningham chain ( $2p + 1$ )
52799	$2288999415 \cdot 2^{15937} - 1$	4807	p133	04	Cunningham chain (p)
52828	$7911 \cdot 2^{15823} - 1$	4768	K	87	Woodall
52846	$V(22811)/(2469062641 \cdot 84961206854418761)$	4741	c8	04	Lucas cofactor, ECPP
52884	$\text{prim}U(25493)$	4695	c8	07	Fibonacci primitive part, ECPP
52885	$p(17819598)$	4695	c46	09	Partitions, ECPP
53101	$1793349831 \cdot 2^{15257} + 1$	4603	p133	04	Cunningham chain 2nd kind ( $4p - 3$ )
53159	$p(17120312)$	4602	c39	07	Partitions, ECPP
53160	$p(17120303)$	4602	c39	07	Partitions, ECPP
53207	$1110159213 \cdot 2^{15166} + 1$	4575	g250	02	Cunningham chain 2nd kind ( $4p - 3$ )
53221	$\text{prim}B(95655)$	4564	c4	09	Lucas Aurifeuillian primitive part, ECPP

rank	description	digits	who	year	comment
53222	$3345660375 \cdot 2^{15127} + 1$	4564	p94	02	Cunningham chain 2nd kind ( $4p - 3$ )
53225	$\text{Phi}(6685, -10)$	4560	c8	03	Unique, ECPP
53386	$\text{primV}(29810)$	4515	c8	04	Lucas primitive part, ECPP
53413	[ Long prime 53413 ]	4498	c4	04	Euler irregular, ECPP
53436	[ Long prime 53436 ]	4479	c8	04	Fibonacci cofactor, ECPP
53449	$p(16102957)$	4463	c46	09	Partitions, ECPP
53456	$p(16026516)$	4452	c39	06	Partitions, ECPP
53461	$\text{primU}(34593)$	4444	c8	07	Fibonacci primitive part, ECPP
53462	$\text{primA}(53155)$	4444	x25	02	Lucas Aurifeuillian primitive part, cyclotomy
53474	$2^{14699} + 2^{7350} + 1$	4425	O	00	Gaussian Mersenne norm 27
53483	$\text{primU}(38181)$	4414	c8	07	Fibonacci primitive part, ECPP
53486	$\text{primA}(52825)$	4414	x25	03	Lucas Aurifeuillian primitive part
53514	$\text{primB}(79125)$	4389	c4	09	Lucas Aurifeuillian primitive part, ECPP
53519	$p(15502228)$	4379	c46	09	Partitions, ECPP
53523	$p(15446832)$	4371	c8	06	Partitions, ECPP
53527	$p(15432340)$	4369	c8	06	Partitions, ECPP
53531	$p(15421217)$	4367	c8	06	Partitions, ECPP
53532	$p(15415500)$	4366	c8	06	Partitions, ECPP
53533	$(2^{14561} - 1)/8074991336582835391$	4365	c8	04	Mersenne cofactor, ECPP
53534	[ Long prime 53534 ]	4365	c4	08	Mersenne cofactor, ECPP
53538	$\text{Phi}(3273, -100)$	4361	c8	03	Unique, ECPP
53540	$(2^{14479} + 1)/3$	4359	c4	04	Generalized Lucas number, Wagstaff, ECPP
53559	$\text{Phi}(1087, -10000)$	4344	c8	02	Unique, ECPP
53706	$\text{primB}(56815)$	4314	c4	09	Lucas Aurifeuillian primitive part, ECPP
53719	$\text{primV}(20578)$	4301	p54	01	Lucas primitive part
53752	$\text{primU}(21053)$	4274	c8	07	Fibonacci primitive part, ECPP
53759	$\text{primU}(31209)$	4264	c8	07	Fibonacci primitive part, ECPP
53779	$\text{primV}(21298)$	4249	c4	09	Lucas primitive part, ECPP
53804	$\text{Phi}(483, -10^{16})$	4224	c8	02	Unique, ECPP
53820	[ Long prime 53820 ]	4200	c8	03	Irregular, ECPP
53821	$\text{primU}(25115)$	4199	CH3	05	Fibonacci primitive part
53850	$\text{primU}(30687)$	4173	c8	07	Fibonacci primitive part, ECPP
53983	$V(19469)$	4069	x25	02	Lucas number, cyclotomy, APR- CL assisted
54026	$1477! + 1$	4042	D	84	Factorial
54253	[ Long prime 54253 ]	4002	c8	04	Fibonacci cofactor, ECPP
54255	$\text{primV}(19148)$	4001	p12	01	Lucas primitive part
54272	$U(19051)/44198321$	3974	c8	04	Fibonacci cofactor, ECPP
54297	$U(18919)/1497228584233$	3942	c8	04	Fibonacci cofactor, ECPP
54301	$\text{primU}(22939)$	3933	c8	07	Fibonacci primitive part, ECPP
54317	$\text{Phi}(1959, 1000)$	3912	c8	02	Unique, ECPP
54333	$\text{primA}(52855)$	3888	c4	09	Lucas Aurifeuillian primitive part, ECPP

rank	description	digits	who	year	comment
54336	$primU(23009)$	3883	c8	07	Fibonacci primitive part, ECPP
54337	$primV(18857)$	3882	c4	09	Lucas primitive part, ECPP
54343	$primV(23716)$	3863	p54	01	Lucas primitive part
54350	$-2730 \cdot Bern(1884)/100983617849$	3844	c8	03	Irregular, ECPP
54368	$2840178 \cdot Bern(1870)/85$	3821	c8	03	Irregular, ECPP
54374	[ Long prime 54374 ]	3815	c8	04	Fibonacci cofactor, ECPP
54430	$Phi(955, -100000)$	3801	c8	02	Unique, ECPP
54456	[ Long prime 54456 ]	3734	c8	03	Irregular, ECPP
54458	$12379 \cdot 2^{12379} - 1$	3731	K	84	Woodall
54459	$(2^{12391} + 1)/3$	3730	M	96	Generalized Lucas number, Wagstaff
54546	[ Long prime 54546 ]	3708	c4	08	Mersenne cofactor, ECPP
54578	$primU(32985)$	3672	x23	07	Fibonacci primitive part
54581	[ Long prime 54581 ]	3671	c4	03	Euler irregular, ECPP
54604	$642 \cdot Bern(1802)/15720728189$	3641	c8	03	Irregular, ECPP
54684	$primA(42685)$	3568	c46	08	Lucas Aurifeuillian primitive part
54685	$U(17137)/328335144266897$	3567	c8	04	Fibonacci cofactor, ECPP
54696	$primU(18689)$	3549	c8	07	Fibonacci primitive part, ECPP
54700	$U(17011)/42109783293497$	3542	c8	04	Fibonacci cofactor
54701	$V(17029)/(9570299 \cdot 495749440031)$	3541	c8	04	Lucas cofactor, ECPP
54722	$(2^{11813} - 1)/(70879 \cdot 207971134271377)$	3537	c8	02	Mersenne cofactor, ECPP
54748	$primU(41055)$	3531	c8	07	Fibonacci primitive part, ECPP
54794	$primA(45565)$	3512	c4	09	Lucas Aurifeuillian primitive part, ECPP
54835	$primU(34515)$	3491	c8	03	Fibonacci primitive part, ECPP
54867	$primU(20665)$	3455	DK	99	Fibonacci primitive part
54985	$primU(24699)$	3441	p54	01	Fibonacci primitive part
55662	$(2^{11279} + 1)/3$	3395	PM	98	Cyclotomy, generalized Lucas number, Wagstaff
55691	[ Long prime 55691 ]	3391	c8	04	Fibonacci cofactor, ECPP
55792	$primU(17221)$	3385	c8	03	Fibonacci primitive part, ECPP
55953	$Phi(6135, 10)$	3265	c8	01	Unique, ECPP
55974	$V(15511)/394599841$	3234	c8	04	Lucas cofactor, ECPP
55975	$primU(23211)$	3233	DK	99	Fibonacci primitive part
55990	$(2^{10691} + 1)/3$	3218	c4	04	Generalized Lucas number, Wagstaff, ECPP
55996	$primA(41665)$	3211	c8	03	Lucas Aurifeuillian primitive part, ECPP
56046	$(2^{10501} + 1)/3$	3161	M	96	Generalized Lucas number, Wagstaff
56105	$V(14887)/1256071867381$	3100	c8	04	Lucas cofactor
56139	$Phi(3341, -10)$	3073	c8	01	Unique, ECPP
56161	$2^{10141} + 2^{5071} + 1$	3053	O	00	Gaussian Mersenne norm 26
56227	[ Long prime 56227 ]	3022	c8	02	Mersenne cofactor, ECPP
56234	$V(14449)$	3020	DK	95	Lucas number
56298	$U(14431)$	3016	p54	01	Fibonacci number

rank	description	digits	who	year	comment
56380	$\Phi(3011, -10)$	3010	F2	01	Unique, APR-CL assisted
56515	[ Long prime 56515 ]	2979	c8	02	Mersenne cofactor, ECPP
56540	$U(14177)/2199986861$	2954	c8	04	Fibonacci cofactor
56556	$\text{prim}U(19415)$	2943	c8	03	Fibonacci primitive part, ECPP
56632	$V(13963)$	2919	c11	02	Lucas number, ECPP
56667	$\text{prim}A(51945)$	2894	c8	03	Lucas Aurifeuillian primitive part, ECPP
56671	[ Long prime 56671 ]	2888	c8	02	Mersenne cofactor, ECPP
56691	[ Long prime 56691 ]	2876	c4	01	Mersenne cofactor, ECPP
56694	$9531 \cdot 2^{9531} - 1$	2874	K	84	Woodall
56718	[ Long prime 56718 ]	2844	c2	01	Mersenne cofactor, ECPP
56750	$6569\# - 1$	2811	D	92	Primorial
56790	$\text{prim}B(49785)$	2774	c8	03	Lucas Aurifeuillian primitive part, ECPP
56877	$U(13063)/(4389169 \cdot 10370895133369)$	2710	c8	04	Fibonacci cofactor
56925	$\text{prim}A(52275)$	2676	c8	03	Lucas Aurifeuillian primitive part, ECPP
56968	$U(12743)/8869129$	2656	c8	04	Fibonacci cofactor
57001	[ Long prime 57001 ]	2637	c4	01	Mersenne cofactor, ECPP
57015	$\text{prim}B(48375)$	2634	F3	01	Lucas Aurifeuillian primitive part, APR-CL assisted
57079	$V(12503)/4954888889$	2604	c8	04	Lucas cofactor
57081	$\text{prim}B(31145)$	2603	p54	01	Lucas Aurifeuillian primitive part
57111	$\Phi(3903, 10)$	2600	p44	01	Unique
57341	$\text{prim}B(34045)$	2584	c8	03	Lucas Aurifeuillian primitive part, ECPP
57374	$V(12457)/(1420099 \cdot 81953391325049801)$	2581	c8	04	Lucas cofactor, ECPP
57396	$-E(1078)/361898544439043$	2578	c4	02	Euler irregular, ECPP
57620	$V(12251)$	2561	p54	01	Lucas number
57903	$\text{prim}A(47235)$	2538	c8	03	Lucas Aurifeuillian primitive part, ECPP
58252	$\text{prim}B(53625)$	2508	c8	03	Lucas Aurifeuillian primitive part, ECPP
58368	$974! - 1$	2490	CD	92	Factorial
58812	$U(11807)/(231936709 \cdot 1129990105451996281)$	2441	c8	04	Fibonacci cofactor, ECPP
58849	$E(1028)/(6415 \cdot 56837916301577)$	2433	c4	02	Euler irregular, ECPP
58858	$V(11657)/69172639$	2429	c8	04	Lucas cofactor
58989	$\text{prim}B(45105)$	2407	c8	03	Lucas Aurifeuillian primitive part, ECPP
59073	$E(1004)/(579851915 \cdot 80533376783)$	2364	c4	02	Euler irregular, ECPP
59074	$V(11393)/(3076111 \cdot 5299498382701)$	2362	c8	04	Lucas cofactor
59084	$953477584 \cdot 5501\# - 1$	2355	p133	05	Cunningham chain ( $8p + 7$ )
59163	[ Long prime 59163 ]	2346	c8	04	Fibonacci cofactor, ECPP
59262	$V(11261)/16823009787209$	2341	c8	04	Lucas cofactor

rank	description	digits	who	year	comment
59309	$U(11279)/(34987457 \cdot 70263726073)$	2339	c8	04	Fibonacci cofactor
59310	$7755 \cdot 2^{7755} - 1$	2339	K	84	Woodall
59535	$V(11213)/(224261 \cdot 1476324252027331181)$	2320	c8	04	Lucas cofactor, ECPP
59640	$U(11093)/544296421641613$	2304	c8	04	Fibonacci cofactor
59642	[ Long prime 59642 ]	2303	c2	01	Mersenne cofactor, ECPP
59671	$(2^{7673} - 1)/2563193011919$	2298	M1	97	Mersenne cofactor, cyclotomy
59751	[ Long prime 59751 ]	2286	c8	04	Lucas cofactor, ECPP
59832	[ Long prime 59832 ]	2276	c4	02	Irregular, ECPP
59854	$-36870 \cdot Bern(1228)/1043706675925609$	2272	c4	02	Irregular, ECPP
60074	$V(10691)$	2235	DK	95	Lucas number
60605	$(2^{7331} - 1)/458072843161$	2196	EM	97	Mersenne cofactor, ECPP
60620	[ Long prime 60620 ]	2193	c8	02	Mersenne cofactor, ECPP
60640	$872! + 1$	2188	D	83	Factorial
60713	$Phi(3261, -10)$	2173	F2	01	Unique, APR-CL assisted
60900	$69705381 \cdot 5003\# + 1$	2145	p252	09	Arithmetic progression ( $6, d = 6632285 \cdot 5003\#$ )
60976	$Phi(2137, -10)$	2136	c6	00	Unique, ECPP
61101	$V(10223)/61893855542632111$	2120	c8	04	Lucas cofactor, ECPP
61743	[ Long prime 61743 ]	2074	c2	01	Mersenne cofactor, ECPP
61785	[ Long prime 61785 ]	2069	c4	02	Euler irregular, ECPP
61861	$4104082046 \cdot 4799\# + 5659$	2058	c18	05	Quadruplet (4), ECPP
61862	$4104082046 \cdot 4799\# + 5657$	2058	c18	05	Quadruplet (3), ECPP
61863	$4104082046 \cdot 4799\# + 5653$	2058	c18	05	Quadruplet (2), ECPP
61864	$4104082046 \cdot 4799\# + 5651$	2058	c18	05	Quadruplet (1), ECPP
61933	$V(9839)/491951$	2051	c8	04	Lucas cofactor
61934	$(2^{6883} - 1)/(1885943 \cdot 2043031664890199)$	2051	M1	97	Mersenne cofactor, cyclotomy
61940	$-E(886)/68689$	2051	c4	02	Euler irregular, ECPP
62050	$4787\# + 1$	2038	D	84	Primorial
62318	$U(9677)$	2023	c2	00	Fibonacci number, ECPP
62342	[ Long prime 62342 ]	2022	c8	04	Fibonacci cofactor
64058	[ Long prime 64058 ]	2003	c8	05	Fibonacci cofactor, ECPP
64154	$6611 \cdot 2^{6611} + 1$	1994	K	84	Cullen
64225	$4583\# - 1$	1953	D	92	Primorial
64247	$U(9311)$	1946	DK	95	Fibonacci number
64267	$4547\# + 1$	1939	D	84	Primorial
64412	[ Long prime 64412 ]	1879	c8	04	Lucas cofactor
64516	$4297\# - 1$	1844	D	92	Primorial
64556	$V(8807)/356419291$	1833	c8	04	Lucas cofactor
64625	[ Long prime 64625 ]	1813	c8	05	Mersenne cofactor, ECPP
64773	$2^{5900} + 469721940591$	1777	c45	07	Consecutive primes arithmetic progression ( $4, d = 2880$ ), ECPP
64803	$11628008104 \cdot 4127\# + 1$	1770	p133	05	Cunningham chain 2nd kind ( $8p - 7$ )
64808	$V(8467)$	1770	c2	00	Lucas number, ECPP
64840	$18672891658 \cdot 4099\# + 1591789579$	1763	c14	03	ECPP, consecutive primes arithmetic progression ( $4, d = 210$ )

rank	description	digits	who	year	comment
64891	$4093\# - 1$	1750	CD	92	Primorial
64903	$5795 \cdot 2^{5795} + 1$	1749	K	84	Cullen
64909	$(2^{5807} + 1)/3$	1748	PM	98	Cyclotomy, generalized Lucas number, Wagstaff
64991	[ Long prime 64991 ]	1725	c8	04	Fibonacci cofactor
65042	$1226756544 \cdot 4001\# + 1$	1712	p133	04	Cunningham chain 2nd kind ( $8p - 7$ )
65085	[ Long prime 65085 ]	1701	c8	04	Fibonacci cofactor
65151	[ Long prime 65151 ]	1678	c8	06	Lucas cofactor, ECPP
65360	$V(7741)$	1618	DK	95	Lucas number
65404	$52069470 \cdot 3739\# + 1$	1606	p155	06	Arithmetic progression ( $6, d = 3884057 \cdot 3739\#$ )
65428	$83 \cdot 2^{5318} - 1$	1603	K	84	Woodall
65897	$V(7243)/289721$	1509	c8	04	Lucas cofactor
65965	$45496757 \cdot 3529\# + 1$	1503	p42	06	Arithmetic progression ( $6, d = 3603821 \cdot 3529\#$ )
66100	$11024895887 \cdot 3499\# + 855739$	1491	c18	03	Quadruplet (4), ECPP
66101	$11024895887 \cdot 3499\# + 855737$	1491	c18	03	Quadruplet (3), ECPP
66102	$11024895887 \cdot 3499\# + 855733$	1491	c18	03	Quadruplet (2), ECPP
66103	$11024895887 \cdot 3499\# + 855731$	1491	c18	03	Quadruplet (1), ECPP
66916	$4713 \cdot 2^{4713} + 1$	1423	K	84	Cullen
66990	[ Long prime 66990 ]	1418	c4	02	Irregular, ECPP
67676	$3229\# + 1$	1368	D	84	Primorial
68256	[ Long prime 68256 ]	1343	c4	02	Euler irregular, ECPP
69047	$41812496896 \cdot 3067\# - 1$	1316	p133	04	Cunningham chain ( $8p + 7$ )
69177	$1054831232256 \cdot 3061\# + 1$	1314	p44	03	Cunningham chain 2nd kind ( $8p - 7$ )
69192	$191881920 \cdot 3067\# - 1$	1314	p133	04	Cunningham chain ( $8p + 7$ )
69307	$23^{963} + 1031392866$	1312	c32	05	Consecutive primes arithmetic progression ( $4, d = 1500$ )
69371	[ Long prime 69371 ]	1311	c4	02	Irregular, ECPP
69517	$13657785480 \cdot 3049\# - 1$	1309	p94	02	Cunningham chain ( $8p + 7$ )
69566	$V(6379)/(9823661 \cdot 187797761 \cdot 39735824399)$	1308	c8	04	Lucas cofactor
69740	$2853609856 \cdot 3041\# + 1$	1304	p94	02	Cunningham chain 2nd kind ( $8p - 7$ )
69820	$49157981 \cdot 3041\# + 1$	1303	p151	08	Arithmetic progression ( $6, d = 5151124 \cdot 3041\#$ )
69826	$42261175 \cdot 3041\# + 1$	1303	p151	08	Arithmetic progression ( $6, d = 1552212 \cdot 3041\#$ )
70262	[ Long prime 70262 ]	1292	c8	05	Lucas cofactor, ECPP
70318	$833000864 \cdot 3011\# + 1$	1290	p155	06	Arithmetic progression ( $7, d = 114858412 \cdot 3011\#$ )
70319	$821752479 \cdot 3011\# + 1$	1290	p155	06	Arithmetic progression ( $7, d = 114379137 \cdot 3011\#$ )
70320	$797311599 \cdot 3011\# + 1$	1290	p155	06	Arithmetic progression ( $7, d = 98881303 \cdot 3011\#$ )
70330	$489855608 \cdot 3011\# + 1$	1290	p155	06	Arithmetic progression ( $7, d = 1679489 \cdot 3011\#$ )
70489	$1730304995 \cdot 3001\# + 1$	1287	p73	04	Arithmetic progression ( $7, d = 230408192 \cdot 3001\#$ )

rank	description	digits	who	year	comment
70765	$10271674954 \cdot 2999\# + 3469$	1284	p26	02	Quadruplet (4), ECPP
70766	$10271674954 \cdot 2999\# + 3467$	1284	p26	02	Quadruplet (3), ECPP
70767	$10271674954 \cdot 2999\# + 3463$	1284	p26	02	Quadruplet (2), ECPP
70768	$10271674954 \cdot 2999\# + 3461$	1284	p26	02	Quadruplet (1), ECPP
70792	$4919761805 \cdot 2999\# + 6763$	1284	c23	03	Consecutive primes arithmetic progression ( $4, d = 30$ )
72027	$546! - 1$	1260	D	92	Factorial
73237	$354 \cdot \text{Bern}(754)/(377 \cdot 883462452530494157)$	1225	c4	02	Irregular, ECPP
73312	$V(5851)$	1223	DK	95	Lucas number
73966	$19743490208 \cdot 2801\# - 1$	1208	p133	05	Cunningham chain ( $8p + 7$ )
74247	[ Long prime 74247 ]	1201	c8	02	Irregular, ECPP
75503	[ Long prime 75503 ]	1178	c4	02	Irregular, ECPP
76493	$2722420456827 \cdot 2^{3800} + 7$	1157	c44	07	Quadruplet (4)
76494	$2722420456827 \cdot 2^{3800} + 5$	1157	c44	07	Quadruplet (3)
76495	$2722420456827 \cdot 2^{3800} + 1$	1157	L467	07	Quadruplet (2)
76496	$2722420456827 \cdot 2^{3800} - 1$	1157	L467	07	Quadruplet (1)
76503	$477707955423 \cdot 2^{3802} + 7$	1157	c44	07	Quadruplet (4)
76504	$477707955423 \cdot 2^{3802} + 5$	1157	c44	07	Quadruplet (3)
76505	$477707955423 \cdot 2^{3802} + 1$	1157	L467	07	Quadruplet (2)
76506	$477707955423 \cdot 2^{3802} - 1$	1157	L467	07	Quadruplet (1)
78319	$U(5387)$	1126	WM	90	Fibonacci number
78887	$2657\# + 1$	1115	BC	81	Primorial
79472	$424232794973 \cdot 2593\# + 43789$	1107	c18	09	Quintuplet (5), ECPP
79473	$424232794973 \cdot 2593\# + 43787$	1107	c18	09	Quintuplet (4), ECPP
79474	$424232794973 \cdot 2593\# + 43783$	1107	c18	09	Quintuplet (3), ECPP
79475	$424232794973 \cdot 2593\# + 43781$	1107	c18	09	Quintuplet (2), ECPP
79476	$424232794973 \cdot 2593\# + 43777$	1107	c18	09	Quintuplet (1), ECPP
80238	[ Long prime 80238 ]	1088	c4	02	Irregular, ECPP
80883	$6 \cdot \text{Bern}(674)/337$	1077	c4	02	Irregular, ECPP
81284	$283534892623 \cdot 2477\# + 1091273$	1069	c18	06	Quintuplet (5), ECPP
81285	$283534892623 \cdot 2477\# + 1091269$	1069	c18	06	Quintuplet (4), ECPP
81286	$283534892623 \cdot 2477\# + 1091267$	1069	c18	06	Quintuplet (3), ECPP
81287	$283534892623 \cdot 2477\# + 1091263$	1069	c18	06	Quintuplet (2), ECPP
81288	$283534892623 \cdot 2477\# + 1091261$	1069	c18	06	Quintuplet (1), ECPP
81499	$(2^{3539} + 1)/3$	1065	M	89	First titanic by ECPP, generalized Lucas number, Wagstaff
81716	$-E(510)$	1062	c4	02	Euler irregular, ECPP
81766	[ Long prime 81766 ]	1060	c4	02	Euler irregular, ECPP
81974	$2968802755 \cdot 2459\# + 1$	1057	p155	09	Arithmetic progression ( $8, d = 359463429 \cdot 2459\#$ )
81981	$2519951928 \cdot 2459\# + 1$	1057	p155	09	Cunningham chain 2nd kind ( $8p - 7$ )
82168	$469! - 1$	1051	BC	81	Factorial
82222	$11^{1008} + 998672782$	1050	c32	05	Consecutive primes arithmetic progression ( $4, d = 1080$ )
82681	$142661157626 \cdot 2411\# + 71427877$	1038	c14	02	Consecutive primes arithmetic progression ( $5, d = 30$ )
82759	$6179783529 \cdot 2411\# + 1$	1037	p102	03	Arithmetic progression ( $8, d = 176836494 \cdot 2411\#$ )

rank	description	digits	who	year	comment
82951	$31969211688 \cdot 2399\# + 16073$	1034	c18	02	Quintuplet (5), ECPP
82952	$31969211688 \cdot 2399\# + 16069$	1034	c18	02	Quintuplet (4), ECPP
82953	$31969211688 \cdot 2399\# + 16067$	1034	c18	02	Quintuplet (3), ECPP
82954	$31969211688 \cdot 2399\# + 16063$	1034	c18	02	Quintuplet (2), ECPP
82955	$31969211688 \cdot 2399\# + 16061$	1034	c18	02	Quintuplet (1), ECPP
83092	$R(1031)$	1031	WD	85	Repunit
83766	$2377\# - 1$	1007	D	92	Primorial
85842	$V(4793)$	1002	DK	95	Lucas number
85885	$V(4787)$	1001	DK	95	Lucas number

## 2 The Long Primes

These are the primes that were too long to fit above.

Prime with rank 798 (221071 digits by x34)

$$\text{Phi}(5, (3668 \cdot 16001\# - 1) \cdot (378266 \cdot 16001\#/5 + 1)^7)$$

Prime with rank 6837 (127577 digits by p185)

$$10^{127576} + 1081101080188810801011801 \cdot 10^{63776} + 1$$

Prime with rank 34913 (20562 digits by FE1)

$$((((((2521008887^3 + 80)^3 + 12)^3 + 450)^3 + 894)^3 + 3636)^3 + 70756)^3 + 97220$$

Prime with rank 38304 (15537 digits by x38)

$$(U(9275, 1, 3961) + U(9275, 1, 3960))/(U(9275, 1, 45) + U(9275, 1, 44))$$

Prime with rank 44057 (10136 digits by x38)

$$(U(11987, 1, 2521) - U(11987, 1, 2520))/(U(11987, 1, 36) - U(11987, 1, 35))$$

Prime with rank 44444 (9965 digits by x38)

$$(U(10227, 1, 2521) + U(10227, 1, 2520))/(U(10227, 1, 36) + U(10227, 1, 35))$$

Prime with rank 44682 (9548 digits by x38)

$$(U(6954, 1, 2521) - U(6954, 1, 2520))/(U(6954, 1, 36) - U(6954, 1, 35))$$

Prime with rank 46146 (8125 digits by c13)

$$\text{Phi}(1887, -11758041)/(7549 \cdot 19070968058734261)$$

Prime with rank 49195 (6229 digits by c4)

$$(2^{20887} - 1)/(694257144641 \cdot 3156563122511 \cdot 28533972487913 \cdot 1893804442513836092687)$$

Prime with rank 50979 (5274 digits by c4)

$$(2^{17683} - 1)/(234000819833373807217 \cdot 62265855698776681155719328257)$$

Prime with rank 51285 (5132 digits by p179)

$$(99241437759 \cdot 205881 \cdot 4001\# \cdot (205881 \cdot 4001\# + 1) + 210) \cdot (205881 \cdot 4001\# - 1)/35 + 7$$

Prime with rank 51286 (5132 digits by p179)

$(99241437759 \cdot 205881 \cdot 4001\# \cdot (205881 \cdot 4001\# + 1) + 210) \cdot (205881 \cdot 4001\# - 1)/35 + 5$   
 Prime with rank 51287 (5132 digits by p179)

$(99241437759 \cdot 205881 \cdot 4001\# \cdot (205881 \cdot 4001\# + 1) + 210) \cdot (205881 \cdot 4001\# - 1)/35 + 1$   
 Prime with rank 51288 (5132 digits by p179)

$(91456744909 \cdot 205881 \cdot 4001\# \cdot (205881 \cdot 4001\# + 1) + 210) \cdot (205881 \cdot 4001\# - 1)/35 + 11$   
 Prime with rank 51289 (5132 digits by p179)

$(91456744909 \cdot 205881 \cdot 4001\# \cdot (205881 \cdot 4001\# + 1) + 210) \cdot (205881 \cdot 4001\# - 1)/35 + 7$   
 Prime with rank 51290 (5132 digits by p179)

$(91456744909 \cdot 205881 \cdot 4001\# \cdot (205881 \cdot 4001\# + 1) + 210) \cdot (205881 \cdot 4001\# - 1)/35 + 5$   
 Prime with rank 51291 (5132 digits by p179)

$(84055657369 \cdot 205881 \cdot 4001\# \cdot (205881 \cdot 4001\# + 1) + 210) \cdot (205881 \cdot 4001\# - 1)/35 + 13$   
 Prime with rank 51292 (5132 digits by p179)

$(84055657369 \cdot 205881 \cdot 4001\# \cdot (205881 \cdot 4001\# + 1) + 210) \cdot (205881 \cdot 4001\# - 1)/35 + 7$   
 Prime with rank 51293 (5132 digits by p179)

$(84055657369 \cdot 205881 \cdot 4001\# \cdot (205881 \cdot 4001\# + 1) + 210) \cdot (205881 \cdot 4001\# - 1)/35 + 1$   
 Prime with rank 51294 (5132 digits by p179)

$(63140956174 \cdot 205881 \cdot 4001\# \cdot (205881 \cdot 4001\# + 1) + 210) \cdot (205881 \cdot 4001\# - 1)/35 + 7$   
 Prime with rank 51295 (5132 digits by p179)

$(63140956174 \cdot 205881 \cdot 4001\# \cdot (205881 \cdot 4001\# + 1) + 210) \cdot (205881 \cdot 4001\# - 1)/35 + 5$   
 Prime with rank 51296 (5132 digits by p179)

$(63140956174 \cdot 205881 \cdot 4001\# \cdot (205881 \cdot 4001\# + 1) + 210) \cdot (205881 \cdot 4001\# - 1)/35 + 1$   
 Prime with rank 51300 (5132 digits by p179)

$(61310346529 \cdot 205881 \cdot 4001\# \cdot (205881 \cdot 4001\# + 1) + 210) \cdot (205881 \cdot 4001\# - 1)/35 + 13$   
 Prime with rank 51301 (5132 digits by p179)

$(61310346529 \cdot 205881 \cdot 4001\# \cdot (205881 \cdot 4001\# + 1) + 210) \cdot (205881 \cdot 4001\# - 1)/35 + 7$   
 Prime with rank 51302 (5132 digits by p179)

$(61310346529 \cdot 205881 \cdot 4001\# \cdot (205881 \cdot 4001\# + 1) + 210) \cdot (205881 \cdot 4001\# - 1)/35 + 1$   
 Prime with rank 51303 (5132 digits by p179)

$(51803036889 \cdot 205881 \cdot 4001\# \cdot (205881 \cdot 4001\# + 1) + 210) \cdot (205881 \cdot 4001\# - 1)/35 + 7$   
 Prime with rank 53413 (4498 digits by c4)

$E(1736)/(55695515 \cdot 75284987831 \cdot 3222089324971117)$   
 Prime with rank 53436 (4479 digits by c8)

$U(21577)/(8626362776257 \cdot 608114436652075009)$   
 Prime with rank 53534 (4365 digits by c4)  
 $(2^{14621} - 1)/(1958650799081 \cdot 9787919624201558678734079)$   
 Prime with rank 53820 (4200 digits by c8)  
 $276474 \cdot \text{Bern}(2030)/(19426085 \cdot 24191786327543)$   
 Prime with rank 54253 (4002 digits by c8)  
 $U(19433)/(8200903423639793 \cdot 124790158973035710313 \cdot 163702910239586286961573)$   
 Prime with rank 54374 (3815 digits by c8)  
 $U(18427)/(1828363793 \cdot 23130933997 \cdot 11364458229549793)$   
 Prime with rank 54456 (3734 digits by c8)  
 $-197676570 \cdot 18851280661 \cdot \text{Bern}(1836)/(59789 \cdot 3927024469727)$   
 Prime with rank 54546 (3708 digits by c4)  
 $(2^{12451} - 1)/(4980401 \cdot 15289230353 \cdot 1143390212315192593598809)$   
 Prime with rank 54581 (3671 digits by c4)  
 $E(1468)/(95 \cdot 217158949445380764696306893 \cdot 597712879321361736404369071)$   
 Prime with rank 55691 (3391 digits by c8)  
 $U(16369)/(299022540829 \cdot 8523458822385578881)$   
 Prime with rank 56227 (3022 digits by c8)  
 $(2^{10169} - 1)/10402314702094700470118039921523041260063$   
 Prime with rank 56515 (2979 digits by c8)  
 $(2^{10007} - 1)/(14477908246561 \cdot 136255313 \cdot 10368448917257)$   
 Prime with rank 56671 (2888 digits by c8)  
 $(2^{9697} - 1)/(724126946527 \cdot 19092282046942032847)$   
 Prime with rank 56691 (2876 digits by c4)  
 $(2^{9733} - 1)/(2932747561 \cdot 353435802999708808999 \cdot 4424579967215442704801447)$   
 Prime with rank 56718 (2844 digits by c2)  
 $(2^{9901} - 1)/(87770464009 \cdot 4512717821471308759 \cdot 8336998551279784091551 \cdot$   
 $1017688752041649660766793 \cdot 25146117302614435382787771401 \cdot$   
 $1502440689076527620360606617623599)$   
 Prime with rank 57001 (2637 digits by c4)  
 $(2^{8849} - 1)/(52368383 \cdot 15264764469472455023)$   
 Prime with rank 59163 (2346 digits by c8)  
 $U(11393)/(38772745844002993 \cdot 2788032223609253801)$

Prime with rank 59642 (2303 digits by c2)

$$(2^{7757} - 1)/233293220467553594643512097574361$$

Prime with rank 59751 (2286 digits by c8)

$$V(11173)/(25206289 \cdot 28583254701767411959 \cdot 24018475125955094159731)$$

Prime with rank 59832 (2276 digits by c4)

$$-2090369190 \cdot \text{Bern}(1236)/(103 \cdot 939551962476779 \cdot 157517441360851951)$$

Prime with rank 60620 (2193 digits by c8)

$$(2^{7417} - 1)/(1930694161304071 \cdot 3888241452787718190543521)$$

Prime with rank 61743 (2074 digits by c2)

$$(2^{7039} - 1)/(1324401538053479 \cdot 8541573097 \cdot 218216841131937276721)$$

Prime with rank 61785 (2069 digits by c4)

$$-E(902)/(9756496279 \cdot 314344516832998594237)$$

Prime with rank 62342 (2022 digits by c8)

$$U(9931)/(3079452003211541 \cdot 122039293401017981 \cdot 604956242930486632441)$$

Prime with rank 64058 (2003 digits by c8)

$$U(9967)/(120801834061 \cdot 3105570884441 \cdot 1047583984031437 \cdot 22727240300133999677 \cdot 15086016388211003643481)$$

Prime with rank 64412 (1879 digits by c8)

$$V(9209)/(29745071 \cdot 101409509 \cdot 547683904686691 \cdot 4025749704474499)$$

Prime with rank 64625 (1813 digits by c8)

$$(2^{6199} - 1)/(46113927071 \cdot 3895469424045161025776010136475884556282201)$$

Prime with rank 64991 (1725 digits by c8)

$$U(8537)/(900766408671673 \cdot 558828605201 \cdot 17191134589117 \cdot 9229577309895207361)$$

Prime with rank 65085 (1701 digits by c8)

$$U(8353)/(176465477 \cdot 2184683363573 \cdot 3620673479519515599362549)$$

Prime with rank 65151 (1678 digits by c8)

$$V(8329)/(5533286033716829 \cdot 62798306322672929543921 \cdot 2398413145658705436562211)$$

Prime with rank 66990 (1418 digits by c4)

$$-54570 \cdot \text{Bern}(848)/(428478023 \cdot 5051145078213134269)$$

Prime with rank 68256 (1343 digits by c4)

$$-E(638)/(7235862947323 \cdot 11411779188663863 \cdot 526900327479624797)$$

Prime with rank 69371 (1311 digits by c4)

$$138 \cdot \text{Bern}(814) / (28409964671 \cdot 335055893 \cdot 351085907 \cdot 520460183 \cdot 30348030379 \cdot 17043083582983)$$

Prime with rank 70262 (1292 digits by c8)

$$V(6661) / (20413264084399 \cdot 254844997471 \cdot 6472729219639 \cdot 8036635984600095627961 \cdot 64250170013936618067104660874142964379889)$$

Prime with rank 74247 (1201 digits by c8)

$$-690 \cdot \text{Bern}(748) / (720511 \cdot 138192830377045750339532383)$$

Prime with rank 75503 (1178 digits by c4)

$$6 \cdot \text{Bern}(734) / (377231593 \cdot 75401119 \cdot 170508089)$$

Prime with rank 80238 (1088 digits by c4)

$$-88230 \cdot \text{Bern}(688) / (465776197109 \cdot 1913589601207)$$

Prime with rank 81766 (1060 digits by c4)

$$-E(526) / (5062100689 \cdot 71096484738291757946225730043997)$$

### 3 Table of Proof-Codes

Key to Proof-Codes (primality provers):

code	description
BC	Penk, Buhler, Crandall
C	Caldwell, Cruncher
c2	Water, Primo
c4	Broadhurst, Primo
c6	Larrosa, Primo
c8	Water, Broadhurst, Primo
c11	Oakes, Primo
c13	Steward, OpenPFGW, Primo
c14	Fougeron, Primo
c18	Luhn, Primo
c23	Andersen, Alm, OpenPFGW, Primo
c31	Andersen, Alm, Rosenthal, OpenPFGW, Primo
c32	DavisK, OpenPFGW, Primo
c33	Chaglassian, Primo
c36	Andersen, Willegen, Rosenthal, OpenPFGW, Primo
c39	Minovic, OpenPFGW, Primo
c41	Andersen, Rosenthal, Primo
c42	Peets, Primo
c44	Barnes, LLR, NewPGen, Primo
c45	DavisK, NewPGen, Primo
c46	Boncompagni, Primo
c47	Chandler, Primo
c48	Peets, OpenPFGW, Primo
CD	Dubner, Caldwell, Cruncher
CH1	Soule, Minovic, CHG, Primo, OpenPFGW
CH2	Wu <sub>T</sub> , CHG, Primo, OpenPFGW
CH3	Water, Broadhurst, CHG, Primo, OpenPFGW

code	description
CH4	Irvine, Water, Broadhurst, CHG, Primo, OpenPFGW
CH6	Steward, CHG, Primo, OpenPFGW
D	Dubner, Cruncher
DK	Dubner, Keller, Cruncher
DM	Demichel
DS	Smith <sub>Darren</sub> , <i>Proth.exe</i>
EM	Morain, Mayer
F2	Broadhurst, Primo, OpenPFGW, VFYPR
F3	Water, Broadhurst, VFYPR
f7	Heuer, ForEis, PhiSieve, OpenPFGW, PIES
f14	Hillegas, ForEis, PhiSieve, PIES
FE1	Morain, FastECPP
FE2	Wirth, Kleinjung, Franke, FastECPP
FE3	Wirth, Kleinjung, Franke, Morain, FastECPP
FE4	Morain, Broadhurst, FastECPP, OpenPFGW
FE5	Luhn, Morain, FastECPP
FE6	Jordan, Morain, FastECPP, LLR
FE7	Deng, Morain, FastECPP
FE8	Oakes, Morain, Water, Broadhurst, FastECPP
FE9	Morain, Water, Broadhurst, FastECPP
g0	Gallot, <i>Proth.exe</i>
g1	Caldwell, <i>Proth.exe</i>
G1	Armengaud, GIMPS, Prime95
G2	Spence, GIMPS, Prime95
G3	Clarkson, Kurowski, GIMPS, Prime95
G4	Hajratwala, Kurowski, GIMPS, Prime95
G5	Cameron, Kurowski, GIMPS, Prime95
G6	Shafer, GIMPS, Prime95
G7	Findley <sub>J</sub> , <i>GIMPS, Prime95</i>
G8	Nowak, GIMPS, Prime95
G9	Boone, Cooper, GIMPS, Prime95
G10	Smith <sub>E</sub> , <i>GIMPS, Prime95</i>
G11	Elvenich, GIMPS, Prime95
G12	Strindmo, GIMPS, Prime95
g23	Ballinger, <i>Proth.exe</i>
g25	OHare, <i>Proth.exe</i>
g55	Toplic, <i>Proth.exe</i>
g59	Linton, <i>Proth.exe</i>
g106	Kuechler, <i>Proth.exe</i>
g122	Nohara, <i>Proth.exe</i>
g132	Cosgrave, <i>Proth.exe</i>
g141	Scott, <i>Proth.exe</i>
g142	HermleGC, <i>Proth.exe</i>
g148	Samidoost, <i>Proth.exe</i>
g157	Loeh, <i>Proth.exe</i>
g181	Bodenstein, <i>Proth.exe</i>
g182	McElhatton, <i>Proth.exe</i>
g196	Odermatt, <i>Proth.exe</i>
g197	Muischnek, <i>Proth.exe</i>
g208	Tawaris, <i>Proth.exe</i>

code	description
g216	Underbakke, Carmody, PRP, NewPGen, Proth.exe
g233	Overmann, Proth.exe
g236	Heuer, GFNSearch, GFN17Sieve, Proth.exe
g243	Sorensen, Proth.exe
g245	Cosgrave, PRP, NewPGen, Proth.exe
g250	Angel, Jobling, Augustin, NewPGen, Proth.exe
g258	Neves, PRP, NewPGen, Proth.exe
g259	Papp, Proth.exe
g260	AYENI, Proth.exe
g262	Kapek, Proth.exe
g265	Wolter, MultiSieve, GenWoodall, Proth.exe
g266	Hagel, Proth.exe
g267	Grobstich, PRP, NewPGen, Proth.exe
g277	Eaton, PRP, NewPGen, Proth.exe
g279	Cooper, PRP, NewPGen, Proth.exe
g281	Berndt, Proth.exe
g290	Sun, PRP, NewPGen, Proth.exe
g294	Underbakke, TwinGen, PRP, Proth.exe
g295	Underbakke, AthGFNSieve, Proth.exe
g299	Dowd, Scott, Proth.exe
g300	Zilmer, Proth.exe
g305	Berg2, Proth.exe
g308	Angel, GFNSearch, GFN17Sieve, Proth.exe
g336	Tornberg, PRP, NewPGen, Proth.exe
g346	Dausch, ProthSieve, PRP, PrimeSierpinski, Proth.exe
g372	Adney, PRP, NewPGen, Proth.exe
g380	Tajima, PRP, NewPGen, Proth.exe
g387	Muzik, Proth.exe
g392	HermleGC, MultiSieve, OpenPFGW, Proth.exe
g396	Boncompagni, PRP, NewPGen, Proth.exe
g403	Yoshimura, ProthSieve, LLR, PrimeSierpinski, Proth.exe
g404	Taniguchi, Proth.exe
g407	HermleGC, MultiSieve, PRP, Proth.exe
g409	Melo, PRP, NewPGen, Proth.exe
g410	Anonymous, AthGFNSieve, GFNSearch, GFN16Sieve, Proth.exe
g411	Brittenham, PRP, NewPGen, Proth.exe
g413	Scott, AthGFNSieve, Proth.exe
g414	Gilvey, Srsieve, LLR, PrimeGrid, PrimeSierpinski, Proth.exe
g418	Taura, PRP, NewPGen, Proth.exe
g422	Saridis, NewPGen, Proth.exe
g423	Ballinger, PRP, NewPGen, Proth.exe
gb1	Buechel, Keller, PRP, Proth.exe
gb2	Buechel, Keller, PRP, NewPGen, Proth.exe
GC1	Angel, GFNSearch, GFN16Sieve, Proth.exe
GC2	Hluchan, GFNSearch, GFN16Sieve, Proth.exe
GF0	Gallot, Proth.exe, GFNSieve, GFNSearch
GF2	Heuer, Proth.exe, GFNSieve, GFNSearch
GF3	Penrose, Proth.exe, GFNSieve, GFNSearch
gm	Morii, Proth.exe
gt	Taura, Proth.exe

code	description
K	Keller
L2	Penne, NewPGen, LLR
L4	Sun, NewPGen, LLR
L6	Xiao, LLR
L10	Ritschel, NewPGen, LLR
L30	Ritschel, NewPGen, 321search, LLR
L35	Faith, RieselSieve, LLR
L40	AndersonM, Ksieve, 15k, LLR
L47	Bishop <sub>D</sub> , ProthSieve, RieselSieve, LLR
L49	Stolz, ProthSieve, RieselSieve, LLR
L51	Hedges, PRP, NewPGen, LLR
L53	Zaveri, ProthSieve, PRP, RieselSieve, LLR
L56	Minovic, Ksieve, NewPGen, LLR
L62	Ewing, NewPGen, 12121search, LLR
L65	Clowes, NewPGen, 12121search, LLR
L73	Wallace, ProthSieve, NewPGen, RieselSieve, LLR
L76	Meissner, ProthSieve, RieselSieve, LLR
L77	Depereyra, 321search, LLR
L80	Benson, NewPGen, LLR
L81	Heuer, NewPGen, LLR
L84	Mischel, RieselSieve, LLR
L93	Sefko, ProthSieve, RieselSieve, LLR
L95	Urushi, LLR
L99	Underbakke, TwinGen, LLR
L100	Minovic, TwinGen, LLR
L101	Aggarwal, ProthSieve, PrimeSierpinski, LLR
L105	Hoof, ProthSieve, RieselSieve, LLR
L109	Nair, NewPGen, LLR
L111	Fisher, ProthSieve, RieselSieve, LLR
L113	Chatfield, NewPGen, LLR
L123	Gillion, NewPGen, LLR
L124	Rodenkirch, MultiSieve, LLR
L126	Keiser, NewPGen, LLR
L129	Snyder, LLR
L134	Childers, ProthSieve, RieselSieve, LLR
L139	Metcalf, NewPGen, Rieselprime, LLR
L145	Minovic, Ksieve, NewPGen, Rieselprime, LLR
L153	Eckhard, LLR
L158	Underwood, NewPGen, 321search, LLR
L160	Wong, ProthSieve, RieselSieve, LLR
L162	Banka, NewPGen, 12121search, LLR
L163	Ritschel, NewPGen, Rieselprime, LLR
L165	Keiser, OpenPFGW, NewPGen, LLR
L170	Crosa, LLR
L172	Smith, ProthSieve, RieselSieve, LLR
L175	Du, ProthSieve, RieselSieve, LLR
L179	White, ProthSieve, RieselSieve, LLR
L185	Hassler, NewPGen, LLR
L191	Banka, NewPGen, LLR
L192	Jaworski, LLR

code	description
L193	Rosink, ProthSieve, RieselSieve, LLR
L197	DaltonJ, ProthSieve, RieselSieve, LLR
L200	Jaworski, Ksieve, NewPGen, Rieselprime, LLR
L201	Siemelink, LLR
L202	Vautier, McKibbon, Gribenko, NewPGen, PrimeGrid, TPS, LLR
L203	Murata, LLR
L212	Apps, NewPGen, PrimeGrid, TPS, LLR
L217	Lehmann, Rieselprime, LLR
L251	Burt, NewPGen, Rieselprime, LLR
L255	Kramer, NewPGen, PrimeGrid, TPS, LLR
L256	Underwood, Srsieve, NewPGen, 321search, LLR
L257	Ritschel, Srsieve, Rieselprime, LLR
L268	Metcalfe, Srsieve, Rieselprime, LLR
L271	Klahn, NewPGen, PrimeGrid, TPS, LLR
L282	Curtis, Srsieve, Rieselprime, LLR
L315	Rhodes, NewPGen, PrimeGrid, TPS, LLR
L321	Broadhurst, OpenPFGW, NewPGen, LLR
L323	Minovic, Srsieve, NewPGen, Rieselprime, LLR
L329	Schoenrogge, NewPGen, PrimeGrid, TPS, LLR
L381	Mate, Siemelink, Rodenkirch, MultiSieve, LLR
L384	Pinho, Srsieve, Rieselprime, LLR
L391	Rodenkirch, Srsieve, LLR
L392	Rodenkirk, NewPGen, PrimeGrid, TPS, LLR
L421	Bonath, Srsieve, Rieselprime, LLR
L426	Jaworski, Srsieve, Rieselprime, LLR
L436	Andersen2, Gcwsieve, MultiSieve, PrimeGrid, LLR
L446	Saridis, NewPGen, Proth.exe, LLR
L447	Kohlman, Gcwsieve, MultiSieve, PrimeGrid, LLR
L453	Straubinger, NewPGen, PrimeGrid, TPS, LLR
L466	Zhou, NewPGen, LLR
L467	Barnes, NewPGen, LLR
L478	Sutton1, Goforth, Srsieve, Rieselprime, LLR
L486	Goforth, Curtis, Srsieve, Rieselprime, LLR
L488	Sutton1, Srsieve, NewPGen, Rieselprime, LLR
L503	Benson, Srsieve, LLR
L521	Thompson1, Gcwsieve, MultiSieve, PrimeGrid, LLR
L527	Tornberg, TwinGen, LLR
L545	AndersonM, NewPGen, Rieselprime, LLR
L590	Padro, NewPGen, 12121search, LLR
L606	Bennett, Srsieve, NewPGen, PrimeGrid, 321search, LLR
L613	Keogh, Srsieve, ProthSieve, RieselSieve, LLR
L621	Sutton1, Srsieve, Rieselprime, LLR
L622	Cardall, Srsieve, ProthSieve, RieselSieve, LLR
L623	Jaworski, Srsieve, NPLB, LLR
L632	Stokkedalen, Rieselprime, LLR
L635	Vogel, Srsieve, PrimeGrid, LLR
L639	Depereyra, Srsieve, Rieselprime, LLR
L645	Luhn, LLR
L651	Courty, Srsieve, PrimeGrid, LLR
L652	Wu <sub>T</sub> , NewPGen, LLR

code	description
L656	Yama, Srsieve, PrimeGrid, LLR
L667	Riesen, NewPGen, LLR
L668	Ueda, Srsieve, PrimeGrid, LLR
L669	Harvey, Srsieve, PrimeGrid, LLR
L679	Foody, Srsieve, PrimeGrid, LLR
L687	Slomma, Srsieve, PrimeGrid, LLR
L717	Laluk, Srsieve, PrimeGrid, LLR
L732	Embling, Srsieve, PrimeGrid, LLR
L753	Wolfram, Srsieve, PrimeGrid, LLR
L769	Chu, Srsieve, NPLB, LLR
L780	Brady, Srsieve, PrimeGrid, LLR
L801	Gesker, Gcwsieve, MultiSieve, PrimeGrid, LLR
L872	Gronow, Srsieve, PrimeGrid, LLR
L917	Bergman1, Gcwsieve, MultiSieve, PrimeGrid, LLR
L922	Vogel, NewPGen, PrimeGrid, LLR
L923	Kaiser1, Klahn, NewPGen, PrimeGrid, TPS, SunGard, LLR
L983	Wu <sub>T</sub> , <i>LLR</i>
L1065	Gockel, Srsieve, PrimeGrid, LLR
M	Morain
M1	Mayer, Mihailescu
MM	Morii
O	Oakes
p5	Jobling, OpenPFGW
p8	Caldwell, OpenPFGW
p12	Water, OpenPFGW
p16	Heuer, OpenPFGW
p21	Anderson, Robinson, OpenPFGW
p26	Bell, OpenPFGW
p35	Augustin, NewPGen, OpenPFGW
p41	Luhn, OpenPFGW
p42	Oakes, OpenPFGW
p43	Fougeron, OpenPFGW
p44	Broadhurst, OpenPFGW
p48	Binnekamp, OpenPFGW
p49	Berg, OpenPFGW
p54	Water, Broadhurst, OpenPFGW
p58	Glover, Oakes, OpenPFGW
p62	Underwood, PrimeForm <sub>e</sub> group, <i>OpenPFGW</i>
p65	DavisK, Kuosa, OpenPFGW
p72	Caldwell, ForEis, PhiSieve, PIES, OpenPFGW
p73	Fougeron, Rosenthal, OpenPFGW
p77	Harvey, MultiSieve, GenWoodall, OpenPFGW
p85	Marchal, Carmody, Kuosa, OpenPFGW
p86	Cousins, TwinGen, PRP, PSearch, OpenPFGW
p94	Angel, Jobling, Augustin, NewPGen, OpenPFGW
p97	Andersen, OpenPFGW
p100	Underbakke, Carmody, PRP, NewPGen, OpenPFGW
p102	Underwood, Frind, OpenPFGW
p103	Harvey, MultiSieve, OpenPFGW
p108	Sun, OpenPFGW

code	description
p114	Samidoost, FermFact, PRP, OpenPFGW
p116	Eaton, NewPGen, OpenPFGW
p117	Rodenkirch, MultiSieve, GenWoodall, OpenPFGW
p120	Minovic, MultiSieve, GenWoodall, OpenPFGW
p122	Sun, PRP, NewPGen, OpenPFGW
p126	Minovic, MultiSieve, OpenPFGW
p133	Sun, NewPGen, OpenPFGW
p135	Heuer, PRP, NewPGen, OpenPFGW
p148	Yama, Noda, Nohara, PRP, NewPGen, MatGFN, OpenPFGW
p151	Kubota, NewPGen, OpenPFGW
p155	DavisK, NewPGen, OpenPFGW
p156	Murata, Noda, Nohara, PRP, NewPGen, MatGFN, OpenPFGW
p158	Paridon, NewPGen, OpenPFGW
p160	Ayuchan, AthGFNSieve, OpenPFGW
p162	AndersonM, Grobstich, Broadhurst, OpenPFGW
p164	Morain, Broadhurst, OpenPFGW
p166	Yamada, Noda, Nohara, PRP, NewPGen, MatGFN, OpenPFGW
p169	Eaton, PRP, NewPGen, OpenPFGW
p179	DavisK, APTreeSieve, OpenPFGW
p185	Carmody, Ksieve, Tetric, OpenPFGW
p189	Bohanon, LLR, OpenPFGW
p190	DiMaria, NewPGen, OpenPFGW
p193	Irvine, Broadhurst, Primo, OpenPFGW
p194	Soule, NewPGen, OpenPFGW
p196	Masser, Srsieve, PRP, Riesel5, OpenPFGW
p197	Sakai, PRP, NewPGen, OpenPFGW
p199	Broadhurst, NewPGen, OpenPFGW
p200	Soule, LLR, NewPGen, OpenPFGW
p217	Rodenkirch, 3Ps, Srsieve, CRUS, OpenPFGW
p218	Minovic, NewPGen, OpenPFGW
p219	Samidoost, FermFact, LLR, OpenPFGW
p221	AndersonLee, NewPGen, OpenPFGW
p227	Harvey, Srsieve, PRP, OpenPFGW
p231	Petat, Srsieve, PRP, CRUS, OpenPFGW
p234	Reynolds, Gcwsieve, PRP, GenWoodall, OpenPFGW
p235	Bedwell, OpenPFGW
p236	Cooper, PRP, NewPGen, OpenPFGW
p237	Platzer1, Gcwsieve, 3Ps, GenWoodall, OpenPFGW
p239	Koen, MultiSieve, GenWoodall, OpenPFGW
p240	Harvey, FermFact, LLR, OpenPFGW
p242	Rodenkirch, Gcwsieve, 3Ps, MultiSieve, GenWoodall, OpenPFGW
p243	Harvey, Gcwsieve, MultiSieve, LLR, OpenPFGW
p252	Oakes, NewPGen, OpenPFGW
p256	Chatfield, Srsieve, CRUS, OpenPFGW
p258	Batalov, Srsieve, CRUS, OpenPFGW
p259	Underbakke, GenefX64, AthGFNSieve, OpenPFGW
p260	Harvey, Gcwsieve, MultiSieve, GenWoodall, OpenPFGW
p261	Gunn, Srsieve, CRUS, OpenPFGW
PM	Mihailescu
S	Slowinski

code	description
SB10	Agafonov, SoBSieve, ProthSieve, Ksieve, Proth.exe, SB, PRP
SB11	Sunde, SoBSieve, ProthSieve, Ksieve, Proth.exe, SB, PRP
SB2	Burt, Proth.exe, SB, PRP
SB4	DiMichele, Proth.exe, SB, PRP
SB5	Coels, Proth.exe, SB, PRP
SB6	Sundquist, SoBSieve, ProthSieve, Ksieve, Proth.exe, SB, PRP
SB7	Team $prime_{Rib}$ , <i>SoBSieve, ProthSieve, Ksieve, SB, PRP</i>
SB8	Gordon, SoBSieve, ProthSieve, Ksieve, Proth.exe, SB, PRP
SB9	Hassler, SoBSieve, ProthSieve, Ksieve, Proth.exe, SB, PRP
SG	Slowinski, Gage
WC	Colquitt, Welsh
WD	Dubner, Williams, Cruncher
WM	Morain, Williams
x13	Renze
x16	Doumen, Beelen
x23	Water, Renze, Broadhurst, Primo, OpenPFGW
x24	Jarai $z$ , <i>Farkas, Csajbok, Kasza, Jarai</i>
x25	Water, Broadhurst, Primo, OpenPFGW
x28	Iskra
x33	Carmody, Water, Renze, Broadhurst, Primo, OpenPFGW
x34	Caldwell, Broadhurst, OpenPFGW
x36	Irvine, Carmody, Water, Renze, Broadhurst, Primo, OpenPFGW
x37	Zhou, LLR
x38	Broadhurst, Primo, OpenPFGW
x39	Dubner, Keller, Broadhurst, Primo, OpenPFGW
x40	Bedwell, Broadhurst, OpenPFGW
Y	Young